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creeds, and arrangements consist merely of solidified character, the same character will be shown in *all* the social laws, creeds, and arrangements which co-exist; and, further, that any process of amelioration will affect them simultaneously. We saw that tyranny in forms of government, tyranny in the conduct of lord to serf, tyranny in religious organizations and discipline, tyranny in the marital relationship, and tyranny in the treatment of children, regularly flourish together and regularly decrease at like rates. In the same category we must now put—tyranny in commercial laws. Sinking those minor irregularities which pervade all Nature's processes, we shall find that from the days when exportation was a capital crime, down to our own free-trade era, there has been a constant ratio kept between the stringency of mercantile restraints and the stringency of other restraints, as there has also between the increase of commercial liberty and the increase of general liberty.

A few facts will sufficiently exemplify this. Take as one the instance just alluded to, in which associated with autocratic rule in Church, in State, and in feudal hall, we find Edward III., for the purpose of making foreigners come and buy in our markets, prohibiting his subjects from sending abroad any staple goods, "under penalty of death and confiscation"; and further enacting "that the law should be unalterable either by himself or his successors." Observe, too, how this same despotic spirit was exhibited in the regulations requiring these Continental traders to reside during their stay with certain inspectors, commissioned to see the cargoes sold within a specified time and the proceeds reinvested in English goods; and charged to transmit to the Exchequer periodical statements of each merchant's bargains: regulations, by the way, of which the abandonment was in after times lamented by the venerators of ancestral wisdom, much as the abolition of the sliding scale is mourned over by

a certain party of our own day. Note again how, under the same *régime*, labourers were coerced into working for fixed wages; and then how, to keep the balance even, shopkeepers had the prices of provisions dictated to them. Mark, further, that when the most tyrannical of these ordinances fell into disuse, there still continued the less burdensome ones; such as those usury laws, orders to farmers, prescribing of the material for grave-clothes, instructions to manufacturers, &c., referred to in the last chapter. But without going into further detail—without enlarging upon the fact that those intolerable restraints once borne by the manufacturing classes of France were contemporary with intense despotism at court, and a still lingering feudalism in the provinces without tracing the parallelism that exists between the political and commercial bondage under which, in spite of their revolutions, the French still live—without pointing out at length the same connexion of phenomena in Prussia, in Austria, and in other similarly-ruled countries without doing all this, the evidence adduced sufficiently shows that the oppressiveness of a nation's mercantile laws varies as the oppressiveness of its general arrangements and government.

Many much-reverenced social instrumentalities have originated in the primitive necessity of ascribing all causation to special workers—the inability to detach the idea of force from an individual something. Just in proportion as natural phenomena are regarded by any people as of personal instead of impersonal origin, will the phenomena of national life be similarly construed; and, indeed, since moral sequences are less obvious than physical ones, they will be thus construed even more generally. The old belief that a king could fix the value of coinage, and the cry raised at the change of style—"Give us our eleven days," obviously implied minds incapable of conceiving social affairs to be regulated by other than visible, tangible agencies.



That there should be at work some unseen but universally-diffused influences determining the buyings and sellings of citizens and the transactions of merchants from abroad, in a way the most advantageous to all parties, was an idea as foreign to such minds as was that of uniform physical causation to the primitive Greeks ; and, conversely, as the primitive Greeks could understand the operations of Nature being performed by a number of presiding individualities, so, to the people of the middle ages, it

was comprehensible that a proper production and distribution of commodities could be ensured by acts of Parliament and government officials. While the due regulation of trade by natural indestructible forces was inconceivable to them, they could conceive trade to be duly regulated by forces resident in some material instrumentality put together by legislators, clothed in the robes of office, painted by court-flatterers, and decorated with "jewels five words long."

## RELIGIOUS ESTABLISHMENTS

EVERY State-church is essentially popish. *We*, also, have a Vatican - St. Stephen's. It is true that our arch-priest is a composite one. It is true that with us the triple tiara is separated into its parts - one for monarch, one for peers, and one for commons. But this fact makes no difference. In substance, popery is the assumption of infallibility. It matters not in principle whether this assumption is made by one man or by an assembly of men. No doubt the astounding announcement " You must believe what we say is right, and not what you think is right," comes less offensively from the lips of a parliamentary majority than from those of a single individual. But there still arises the question—By what authority do these men assert this?

Before State-paid ministers can be set to preach, it must first be decided *what* they are to preach. And who is to say? Clearly the State. Either it must itself elaborate a creed, or it must depute some man or men to do so. It must in some way sift out truth from error, and cannot escape the responsibility attend-

ing this. If it undertakes itself to settle the doctrines to be taught, it is responsible. If it adopts a ready-made set of doctrines, it is equally responsible. And if it selects its doctrines by proxy, it is still responsible ; both as appointing those who choose for it, and as approving their choice. Hence, to say that a government ought to set up and maintain a system of religious instruction, is to say that it ought to pick out from amongst the various tenets that men hold or have held, those which are right ; and that, when it has done this - when it has settled between the Roman Catholic, the Greek, the Lutheran, and the Anglican creeds, or between High Church, Broad Church, and Evangelical ones - when it has decided whether we should be baptized during infancy or at a mature age, whether the truth is with Trinitarians or Unitarians, whether men are saved by faith or by works, whether pagans go to hell or not, whether ministers should preach in black or white, whether confirmation is scriptural, whether or not saints' days should be kept, and (as we have lately seen it



we are told that "they indemnify themselves for their passiveness to their superiors by their tyranny, cruelty, and violence to those in their power." During the feudal ages, while the people were bondsmen to the nobles, the nobles were vassals to their kings, their kings to the pope. In Russia, at the present moment, the aristocracy are dictated to by their emperor much as they themselves dictate to their serfs.<sup>1</sup>

Prevalence of theft is similarly associated with a predominance of the loyalty-producing faculty. Books of travels give proof that among uncivilized races pilfering and the irresponsible power of chiefs co-exist. The piracy of the Malays and of the Chinese, and the long-continued predatory habits of the Arab races, both on land and sea, exist in conjunction with obedience to despotic rule. "One quality," says Kohl, "which the Lettes show, with all enslaved tribes, is a great disposition to thieving." The Russians, to whom worship of their emperor is a luxury, confess openly that they are cheats, and laugh over the confession. The Poles, whose servile salutation is—"I throw myself under your feet," and among whom nobles are cringed to by the Jews and citizens, and these again by the people, are certainly not noted for probity. Turning to the superior races, we find that they, too, have passed through phases in which this same relationship of characteristics was marked. The times when subjection of serfs to feudal lords was strongest, were times of universal rapine. "In Germany a very large proportion of the rural nobility lived by robbery": their castles being built with a special view to this occupation, and that even by ecclesiastics.<sup>2</sup> Burghers were fleeced, towns

were now and then sacked, and Jews were tortured for their money. Kings were as much thieves as the rest. They laid violent hands on the goods of their vassals, like John of England and Philip Augustus of France; they cheated their creditors by debasing the coinage; they impressed men's horses without paying for them; and they seized the goods of traders, sold them, and pocketed a large part of the proceeds. Meantime, while freebooters overran the land pirates covered the sea: the Cinque Ports and St. Malo being the head quarters of those infesting the English Channel.

Between these days and ours, the gradual decline of loyalty—as shown in the extinction of feudal relationships, in the abandonment of divine right of kings, in the reduction of monarchical power, and in the comparative leniency with which treason is now punished—has accompanied an equally gradual increase of honesty, and of regard for people's lives and liberties. By how much men are still deficient in respect for one another's rights, by so much are they still penetrated with respect for authority; and we may even trace in existing classes a relation between these characteristics. Of such meaning is the observation respecting convicts, quoted and confirmed by Captain Maconochie, that "a good prisoner (*i.e.*, a submissive one) is usually a bad man."<sup>1</sup> If, again, we turn over the newspapers which circulate among court-satellites and chronicle the movements of the *haut-ton*, which ascribe national calamities to the omission of a royal title from a new coin, and which apologize for Continental despots; we read in them excuses for war and standing armies, sneerings at "peace-mongers," defences of capital punishment, condemnations of popular enfranchisement, diatribes against freedom of exchange, rejoicings over territorial robberies, and vindications of church-rate seizures: showing that, where belief in the sacredness of authority most lingers, belief in

<sup>1</sup> This was written before serfdom was abolished.

<sup>2</sup> "An Archbishop of Cologne having built a fortress of this kind, the governor inquired how he was to maintain himself, no revenue having been assigned for that purpose. The prelate only desired him to remark, that the castle was situated near the junction of four cross roads."—Hallam's *Middle Ages*.

<sup>1</sup> See pamphlets on the Mark System of Discipline.



by the severing of the Establishment into Evangelical, High Church, and Puseyite; again, by the Free Church secession; again, by the schism of the Methodists; again, by Unitarian differences; again, by the splitting-off of numberless local congregations not to be classed; and, again, by the preaching that identity of opinion should not be the bond of union—the universal tendency to separate thus exhibited, is simply one of the ways in which a growing assertion of individuality comes out. Ultimately, by continual sub-division, what we call sects will disappear; and in place of that artificial uniformity obtained by stamping men after an authorized pattern, there will arise one of Nature's uniformities—a general similarity qualified by numerous small differences.

From the point of view now arrived at, we may discern how what is termed in our artificial classifications of truth, *morality*, is essentially one with physical truth—is, in fact, a species of transcendental physiology. That condition of things dictated by the law of equal freedom—that condition in which the individuality of each may be unfolded without limit, save the like individualities of others—that condition towards which, as we have just seen, men are progressing, is a condition towards which the whole creation tends. Already it has been incidentally pointed out that only by entire fulfilment of the moral law can life become complete; and now we shall find that all life whatever may be defined as a quality, of which aptitude to fulfil this law is the highest manifestation.

A theory of life developed by Coleridge has prepared the way for this generalization. "By life," says he, "I everywhere mean the true idea of life, or that most general form under which life manifests itself to us, which includes all other forms. This I have stated to be the tendency to individuation; and the degrees or intensities of life to consist in the progressive realizations of this

tendency."<sup>1</sup> To make this definition intelligible, a few of the facts sought to be expressed by it must be specified—facts exemplifying the contrast between low and high types of structure and low and high degrees of vitality.

Restricting our illustrations to the animal kingdom, and beginning where the vital attributes are most obscure, we have, for instance, in the *Porifera*, creatures consisting of nothing but amorphous semi-fluid jelly, supported upon horny fibres (sponge). This jelly possesses no sensitiveness, has no organs, absorbs nutriment from the water which permeates its mass, and, if cut in pieces, lives on, in each part, as before. So that this "gelatinous film," as it has been called, shows little more individuality than a lump of inanimate matter; for, like that, it has no greater completeness than the pieces it is divided into. In some compound polyps which stand next, and with which Coleridge commences, the progress towards individual-

<sup>1</sup> At the time I wrote this I was not aware that Coleridge was indebted to Schelling for this idea. When in 1864, while writing *The Classification of the Sciences*, and seeking for the most general truth presented by physical changes, it became manifest that everywhere and always there goes on either integration of matter and concomitant dissipation of motion, or absorption of motion and concomitant disintegration of matter—when it became manifest that the integration of matter and concomitant dissipation of motion, is the primary trait of all Evolution, a light was thrown on this idea of Schelling. The conception of an individual is a metaphysical one, and the tendency to individuation cannot be represented in physical terms. But since the integration of matter and concomitant dissipation of motion, is a process by which there is formed an aggregate—a distinct object—an individual something; it is clear that the primary process of Evolution may, when looked at apart from any physical interpretation, be considered as resulting from a tendency to individuation. It is clear, too, that this is not a trait of living things alone, but is a trait of all evolving things, inorganic as well as organic, and that only by a forced and artificial meaning given to the word "life," can it be regarded as a definition of life. I have, however, thought it best to let the argument which runs throughout the following pages retain its original shape. The reader will easily translate the successive statements into evolutionary language.



# THE ORIGINS OF RELIGION AND OTHER ESSAYS

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## I.

### THE METHOD OF FOLKLORE

AFTER the heavy rain of a thunderstorm has washed the soil, it sometimes happens that a child, or a rustic, finds a wedge-shaped piece of metal or a few triangular flints in a field or near a road. There was no such piece of metal, there were no such flints, lying there yesterday, and the finder is puzzled about the origin of the objects on which he has lighted. He carries them home, and the village wisdom determines that the wedge-shaped piece of metal is a "thunder-bolt," or that the bits of flint are "elf-shots," the heads of fairy arrows. Such things are still treasured in remote nooks of England, Ireland, and Scotland, and the "thunder-bolt" is applied to cure certain maladies by its touch.

As for the fairy arrows, we know that even in ancient Etruria they were looked on as magical, for we sometimes see their points set, as amulets, in the gold of Etruscan necklaces. In Perugia the arrow-heads are still sold as charms. All educated people, of course, have long been aware that the metal wedge is a celt, or ancient bronze axe-head, and that it was not fairies, but the forgotten peoples of this island, who used the arrows with the tips of flint. Thunder is only so far connected with them that the heavy rains loosen the surface soil, and lay bare its long-hidden secrets.

There is a science, Archæology, which collects and compares the material relics

of old races, the axes and arrow-heads. There is a form of study, Folklore, which collects and compares the similar but immaterial relics of old races, the surviving superstitions and stories, the ideas which are in our time but not of it. Properly speaking, folklore is only concerned with the legends, customs, beliefs, of the Folk, of the people, of the classes which have least been altered by education, which have shared least in progress. But the student of folklore soon finds that these unprogressive classes retain many of the beliefs and ways of savages, just as the Hebridean people use spindle-whorls of stones, and bake clay pots without the aid of the wheel, like modern South Sea Islanders, or like their own prehistoric ancestors.<sup>1</sup> The student of folklore is thus led to examine the usages, myths, and ideas of savages, which are still retained, in rude enough shape, by the European peasantry. Lastly, he observes that a few similar customs and ideas survive in the most conservative elements of the life of educated peoples, in ritual, ceremonial, and religious traditions and myths. Though such remains are rare in England, we may note the custom of leading the dead soldier's horse behind his master to the grave, a relic of days when

<sup>1</sup> A study of the contemporary stone age in Scotland will be found in Mitchell's *Past and Present*.

SCIENCE AND SPECULATION  
~~3 other books.~~

they recognised elemental phenomena in the characters. As usual, these explanations differ widely. Whenever a myth has to be interpreted, it is certain that one set of scholars will discover the sun and the dawn, where another set will see the thunder-cloud and lightning. The moon is thrown in at pleasure.

Preller<sup>1</sup> is a learned scholar, with his own set of etymologies. Jason is derived, he thinks, from *iaopui*, to heal, because Jason studied medicine under the Centaur Chiron. This is the view of the scholiast on Apollonius Rhodius (i. 554). Jason, to Preller's mind, is a form of Asclepius, "a spirit of the spring with its soft suns and fertile rains." Medea is the moon. Medea, on the other hand, is a lightning goddess, in the opinion of Schwartz.<sup>2</sup> No philological reason is offered.

We must suppose, it seems, that either the soft spring rains and the moon, or the dawn and the sun, or the lightning and the thunder-cloud, in one arrangement or another, irresistibly suggested, to early Aryan minds, the picture of a wooer, arriving in a hostile home, winning a maiden's love, achieving adventures by her aid, fleeing with her from her angry father and delaying his pursuit by various devices. Why the spring, the moon, the lightning, the dawn—any of them or all of them—should have suggested such a tale, let scholars determine when they have reconciled their own differences. It is more to our purpose to follow the myth among Samoans, Algonquins, and Finns. None of these races speak an Aryan language, and none can have been beguiled into telling the same sort of tale by a disease of Aryan speech.

Samoa, where we find our story, is the name of a group of volcanic islands in Central Polynesia. They are about 3,000 miles from Sydney, were first observed by Europeans in 1772, and are

as far removed as most spots from direct Aryan influences. Our position is, however, that in the shiftings and migrations of peoples the Jason tale has somehow been swept, like a piece of drift-wood, on to the coasts of Samoa. In the islands the tale has an epical form, and is chanted in a poem of twenty-six stanzas. There is something Greek in the free and happy life of the Samoans—something Greek, too, in this myth of theirs. There was once a youth, Siasi, famous for his singing, a young Thamyris of Samoa. But as, according to Homer, "the Muses met Thamyris the Thracian, and made an end of his singing, for he boasted and said that he would vanquish even the Muses if he sang against them," so did the Samoan god of song envy Siasi. The god and the mortal sang a match: the daughter of the god was to be the mortal's prize if he proved victorious. Siasi won, and he set off, riding on a shark, as Arion rode the dolphin, to seek the home of the defeated deity. At length he reached the shores divine, and thither strayed Puapae, daughter of the god, looking for her comb which she had lost. "Siasi," said she, "how comest thou hither?" "I am come to seek the song-god, and to wed his daughter." "My father," said the maiden, "is more a god than a man: eat nothing he hands you, never sit on a high seat, lest death follow." So they were united in marriage. But the god, like Aeetes, was wroth, and began to set Siasi upon perilous tasks: "Build me a house, and let it be finished this very day, else death and the oven await thee."<sup>1</sup>

Siasi wept, but the god's daughter had the house built by the evening. The other adventures were to fight a fierce dog and to find a ring lost at sea. Just as the Scotch giant's daughter cut off her fingers to help her lover, so the Samoan god's daughter bade Siasi cut her body into pieces and cast her into

<sup>1</sup> *Gr. My.*, ii. 318.

<sup>2</sup> *Sonne, Monds und Sterne*, pp. 213, 229.

<sup>1</sup> This proves that the tale belongs to the pre-Christian cannibal age.

## PREFATORY NOTE

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THE following is a reprint, under a new and it is believed—appropriate title, of the Prolegomena to George Henry Lewes's *History of Philosophy* (3rd edition). It has only been necessary to make a few verbal alterations to fit the essay for separate publication; since, on the whole, it is a self-contained treatise, distinct from the History and representing the philosophy of modern science, as interpreted by Lewes himself.

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Ælian. "The dwellers in Hamaxitus of the Troad worship mice," says Ælian. "In the temple of Apollo Smintheus mice are nourished, and food is offered to them at the public expense, and white mice dwell beneath the altar."<sup>1</sup> In the same way we found that the Peruvians fed their sacred beasts on what they usually saw them eat.

(2) The second point in our argument has already been sufficiently demonstrated. The mouse-name "Smintheus" was given to Apollo in all the places mentioned by Strabo, "and many others."

(3) The figure of the mouse will be associated with the god, and used as a badge, or crest, or local mark, in places where the mouse has been a venerated animal.

The passage already quoted from Ælian informs us that there stood "an effigy of the mouse beside the tripod of Apollo." In Chrysa, according to Strabo (xiii. 604), the statue of Apollo Smintheus had a mouse beneath his foot. The mouse on the tripod of Apollo is represented on a bas-relief illustrating the plague, and the offerings of the Greeks to Apollo Smintheus, as described in the first book of the *Iliad*.<sup>2</sup>

The mouse is not an uncommon local badge or crest in Greece. The animals whose figures are stamped on coins, like the Athenian owl, are the most ancient marks of cities. It is a plausible conjecture that, just as the Iroquois when they signed treaties with the Europeans used their totems—bear, wolf, and turtle—as seals,<sup>3</sup> so the animals on archaic Greek city coins represented crests or

badges which, at some far more remote period, had been totems.

The Argives, according to Pollux, stamped the mouse on their coins.<sup>2</sup> As there was a temple of Apollo Smintheus in Tenedos, we naturally hear of a mouse on the coins of the island.<sup>3</sup> Golzio has published one of these mouse coins. The people of Metapontum stamped their money with a mouse gnawing an ear of corn. The people of Cumæ employed a mouse dormant. Paoli fancied that certain mice on Roman medals might be connected with the family of *Mus*, but this is rather guess-work.<sup>4</sup>

We have now shown traces, at least, of various ways in which an early tribal religion of the mouse—the mouse *puarissa*, as the Peruvians said—may have been perpetuated. When we consider that the superseding of the mouse by Apollo must have occurred, if it did occur, long before Homer, we may rather wonder that the mouse left his mark on Greek religion so long. We have seen mice revered, a god with a mouse-name, the mouse-name recurring in many places, the *huaca*, or idol of the mouse, preserved in the temples of the god, and the mouse-badge used in several widely severed localities. It remains (4) to examine the myths about mice. These, in our opinion, were probably told to account for the presence of the *huaca* of the mouse in temples, and for the occurrence of the animal in religion, and his connection with Apollo.

A singular mouse-myth, narrated by Herodotus, is worth examining for reasons which will appear later, though

<sup>1</sup> Ælian, *H. A.*, xii. 5.

<sup>2</sup> The bas-relief is published in Paoli's *Della Religione de' Gentili*, Naples, 1771, p. 9; also by Fabretti, *ad cal. Oper. de Colum. Trajan.*, p. 315. Paoli's book was written after the discovery in Neapolitan territory of a small bronze image, hieratic in character, representing a man with a mouse on his hand. Paoli's engraving of this work of art, unluckily, does not enable us to determine its date or provenance. The book is a mine of mouse-lore.

<sup>3</sup> Colden, *History of the Five Nations*, p. 15 (1727).

<sup>1</sup> *Onomast.*, ix. segm. 84.

<sup>2</sup> De Witte says Pollux was mistaken here. In the *Revue Numismatique*, N.S. iii., De Witte publishes coins of Alexandria, the more ancient Hamaxitus, in the Troad. The Sminthian Apollo is represented with his bow, and the mouse on his hand. Other coins show the god with the mouse at his foot, or show us the lyre of Apollo supported by mice. A bronze coin in the British Museum gives Apollo with the mouse beside his foot.

<sup>3</sup> Spanheim, *ad Fl. Joseph.*, vi. 1, p. 312.

<sup>4</sup> *Della Rel.*, p. 174.

# (1) SCIENCE AND

## SPECULATION

- (2) *Huxley's Aphorisms & Reflections*
- (3) *Social Statics* by Herbert Spencer.
- (4) *The Origin of Religion* by Andrew Lang

BY

G. H. LEWES,

AUTHOR OF "THE HISTORY OF PHILOSOPHY," ETC.

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the events are said to have happened on Egyptian soil.<sup>1</sup> According to Herodotus, one Sethos, a priest of Hephaestus (Ptah), was king of Egypt. He had disgraced the military class, and he found himself without an army when Sennacherib invaded his country. Sethos fell asleep in the temple, and the god, appearing to him in a vision, told him that divine succour would come to the Egyptians.<sup>2</sup> In the night before the battle field-mice gnawed the quivers and shield-handles of the foe, who fled on finding themselves thus disarmed. "And now," says Herodotus, "there standeth a stone image of this king in the temple of Hephaestus, and in the hand of the image a mouse, and there is this inscription: 'Let whoso looketh on me be pious.'"

Professor Sayce<sup>3</sup> holds that there was no such person as Sethos, but that the legend "is evidently Egyptian, not Greek, and the name of Sennacherib, as well as the fact of the Assyrian attack, is correct." The legend also, though Egyptian, is "an echo of the Biblical account of the destruction of the Assyrian army," an account which omits the mice. "As to the mice, here," says Professor Sayce, "we have to do again with the Greek dragomen (*sic*). The story of Sethos was attached to the statue of some deity which was supposed to hold a mouse in its hand." It must have been easy to verify this supposition; but Mr. Sayce adds, "mice were not sacred in Egypt, nor were they used as symbols, or found on the monuments." To this remark we may suggest some exceptions.

<sup>1</sup> Herodotus, ii. 141.

<sup>2</sup> Liebrecht (*Zur Volkskunde*, p. 13, quoting *Journal Asiatique*, 1st series, 3, 307) finds the same myth in Chinese annals. It is not a god, however, but the king of the rats who appears to the distressed monarch in his dream. Rats then gnaw the bowstrings of his enemies. The invaders were Turks, the rescued prince a king of Khotan. The king raised a temple, and offered sacrifice—to the rats? The same story of rats gnawing bowstrings recurs, of all places, in the *Migration Legend of the Greeks* (Brinton, Philadelphia; 1884).

<sup>3</sup> Herodotus, p. 204.

Apparently this one mouse *was* found on the monuments. Wilkinson (iii. 264) says mice do occur in the sculptures, but they were not sacred. Rats, however, were certainly sacred, and as little distinction is taken, in myth, between rats and mice as between rabbits and hares. The rat was sacred to Ra, the Sun-god, and (like all totems) was not to be eaten.<sup>4</sup> This association of the rat and the Sun cannot but remind us of Apollo and his mouse. According to Strabo, a certain city of Egypt did worship the shrew-mouse. The Athribitæ, or dwellers in Crocodilopolis, are the people to whom he attributes this cult, which he mentions (xvii. 831) among the other local animal-worships of Egypt.<sup>5</sup> Several porcelain examples of the field-mouse sacred to Horus (commonly called Apollo by the Greeks) may be seen in the British Museum.

That rats and field-mice were sacred in Egypt, then, we may believe on the evidence of the Ritual, of Strabo, and of many relics of Egyptian art. Herodotus, moreover, is credited when he says that the statue "had a mouse on its hand." Elsewhere it is certain that the story of the mice gnawing the bowstrings occurs frequently as an explanation of mouse-worship. One of the Trojan "mouse-stories" ran—that emigrants had set out in prehistoric times from Crete. The oracle advised them to settle "wherever they were attacked by the children of the soil." At Hamaxitus in the Troad they were assailed in the night by mice, which ate all that was edible of their

<sup>4</sup> Wilkinson, iii. 249, quoting the Ritual xxxiii.: "Thou devourest the abominable rat of Ra, or the Sun."

<sup>5</sup> Mr. Loftie has kindly shown me a green mouse containing the throne-name of Thothmes III. The animals thus used as substitutes for scarabs were also sacred, as the fish, rhinoceros, fly, all represented in Mr. Loftie's collection. See his *Essay of Scarabs*, p. 27. It may be admitted that, in a country where Cats were gods, the religion of the Mouse must have been struggling and oppressed.



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armour and bowstrings. The colonists made up their mind that these mice were "the children of the soil," settled there, and adored the mouse Apollo.<sup>1</sup> A myth of this sort may either be a story invented to explain the mouse-name; or a Mouse tribe, like the Red Indian Wolves, or Crows, may actually have been settled on the spot, and may even have resisted invasion.<sup>2</sup> Another myth of the Troad accounted for the worship of the mouse Apollo on the hypothesis that he had once freed the land from mice, like the Pied Piper of Hamelin, whose pipe (still serviceable) is said to have been found in his grave by men who were digging a mine.<sup>3</sup>

Stories like these, stories attributing some great deliverance to the mouse, or some deliverance from mice to the god, would naturally spring up among people puzzled by their own worship of the mouse-god or of the mouse. We have explained the religious character of mice as the relics of a past age in which the mouse had been a totem and mouse family names had been widely diffused. That there are, and have been, mice totems and mouse family names among Semitic stocks round the Mediterranean is proved by Professor Robertson Smith:<sup>4</sup> "Achbor, the mouse, is an Edomite name, apparently a stock name, as the jerboa and another mouse-name are among the Arabs. The same name occurs in Judah." Where totemism exists the members of each stock either do not (a rule with exceptions) eat the ancestral animal at all, or only eat him on rare solemn occasions. The totem of a hostile stock may be eaten by way of insult. In the case of the mouse, Isaiah seems to refer to one or other of these practices (lxvi.): "They that sanctify themselves, and purify themselves in the gardens behind one tree in the midst, eating swine's flesh, and

the abomination, and the mouse, shall be consumed together, saith the Lord." This is like the Egyptian prohibition to eat "the abominable" (that is, tabooed or forbidden) "Rat of Ra." If the unclean animals of Israel were originally the totems of each clan, then the mouse was a totem,<sup>1</sup> for the chosen people were forbidden to eat "the weasel, and the mouse, and the tortoise after his kind." That unclean beasts, beasts not to be eaten, were originally totems, Professor Robertson Smith infers from Ezekiel (viii. 10, 11), where "we find seventy of the elders of Israel—that is, the heads of houses—worshipping in a chamber which had on its walls the figures of all manner of unclean [tabooed] creeping things, and quadrupeds, *even all the idols of the house of Israel.*" Some have too hastily concluded that the mouse was a sacred animal among the neighbouring Philistines. After the Philistines had captured the Ark and set it in the house of Dagon, the people were smitten with "emerods." They therefore, in accordance with a well-known savage magical practice, made five golden representations of these "plague-buboës," and five golden mice, as "a trespass offering to the Lord of Israel," and so restored the Ark.<sup>2</sup> Such votive offerings are common still in Catholic countries, and the mice of gold by no means prove that the Philistines had ever worshipped mice (see Introduction, p. 4).

Turning to India from the Mediterranean basin, and the Aryan, Semitic, and Egyptian tribes on its coasts, we find that the mouse was the sacred animal of Rudra. "The mouse, Rudra, is thy beast," says the *Yajur Veda*, as rendered by Grohmann in his *Apollo Smintheus*. Grohmann recognises in Rudra a deity with most of the characteristics of Apollo. In later Indian mythology, the mouse is an attribute of Ganeça who, like Apollo Smintheus, is represented in art with his foot upon a mouse.

<sup>1</sup> Strabo, xiii. 604.

<sup>2</sup> Eustathius on *Iliad*, i. 39.

<sup>3</sup> *A Strange and True Relation of the Prodigious Multitude of Mice*, 1670.

<sup>4</sup> *Journal of Philol.*, xvii. p. 96.

<sup>1</sup> Leviticus xi. 29. •

<sup>2</sup> 1 Samuel 5, 6. ¶

# SCIENCE AND SPECULATION

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## I.—WHAT IS PHILOSOPHY?

§ 1. THEOLOGY, Philosophy, and Science constitute our spiritual triumvirate. The limits of their several dominions have been insensibly shifting, so that at various epochs in History they have been of very varied importance. For centuries the predominance of Theology was absolute and undisputed. Philosophy, meanwhile, grew apace, till at last it was enabled to assert an independent position ; and while these two rivals struggled for supremacy, Science was also quietly and obscurely feeling its way to independence.

§ 2. The office of Theology is now generally recognised as distinct from that of Philosophy and from that of Science. Its ancient claim to authority over all regions of inquiry has long been felt to be untenable, and has been frankly relinquished. Although claiming to hold the keys of the highest Truth, it nevertheless no longer pretends to decide upon the lower, but confesses its inability to furnish Research with effective Methods, or Knowledge with available data. It restricts itself to the region of Faith, and leaves to Philosophy and Science the region of Inquiry. Its main province is the province of Feeling ; its office is the *systematisation of our religious conceptions*.

This is the office not of one Theology, but of all. No matter what other functions the various Theologies may assume,

they invariably assume this, and give it pre-eminence. It is thus not only their common characteristic, but also their highest characteristic ; and now that the course of human evolution has detached both Philosophy and Science from Theology, this systematisation remains its sole function.

§ 3. The office of Science is distinct. It may be defined as the *systematisation of our knowledge of the order of phenomena considered as phenomena*. It co-ordinates common knowledge. It explains the order of phenomena, by bringing them under their respective laws of co-existence and succession, classing particular facts under general conceptions.

§ 4. The office of Philosophy is again distinct from these. It is the *systematisation of the conceptions furnished by Theology and Science*. It is ἐπιστήμη ἐπιστημῶν. As Science is the systematisation of the various generalities reached through particulars, so Philosophy is the systematisation of the generalities of generalities. In other words, Science furnishes the Knowledge, and Philosophy the Doctrine.

Each distinct science embraces a distinct province of knowledge. Mathematics treats of magnitudes, and disregards all other relations ; Physics and Chemistry concern themselves with the changes of inorganic bodies, leaving all vital relations to Biology ; Sociology

Such are the chief appearances of the mouse in ancient religion. If he really was a Semitic totem, it may, perhaps, be argued that his prevalence in connection with Apollo is the result of a Semitic or Aegean leaven in Hellenism. Hellenic invaders may have found Semitic or Aegean mouse-kins at home, and incorporated the alien stock deity with their own Apollo-worship. In that case the mouse, while still originally a totem, would not be an Aryan totem. But probably the myths and rites of the mouse, and their diffusion, are more plausibly explained on our theory than on that of De Gubernatis: "The Pagan Sun-god crushes under his foot the Mouse of Night. When the cat's away, the mice may play; the shadows of night dance when the moon is absent."<sup>1</sup> This is one of the quaintest pieces of mythological logic. Obviously, when the cat (the moon) is away, the mice (the shadows) *cannot* play: there is no light to produce a shadow. As usually chances, the scholars who try to resolve all the features of myth into physical phenomena do not agree among themselves about the mouse. While the mouse is the night according to M. De Gubernatis, in Grohmann's opinion the mouse is the lightning. He argues that the lightning was originally regarded by the Aryan race as the "flashing tooth of a beast," especially of a mouse. Afterwards men came to identify the beast with his teeth, and behold, the lightning and the mouse are convertible mythical terms! Now it is perfectly true that savages regard many elemental phenomena, from eclipses to the rainbow, as the result of the action of animals. The rainbow is a serpent;<sup>2</sup> thunder is caused by the thunder-bird, who has actually been shot in Dacotah, and who is familiar to the Zulus; while rain is the milk of a heavenly cow—an idea recurring in the *Zend Avesta*. But it does not follow because savages believe in

these meteorological beasts that all the beasts in myth were originally meteorological. Man raised a serpent to the skies, perhaps, but his interest in the animal began on earth, not in the clouds. It is excessively improbable, and quite unproved, that any race ever regarded lightning as the flashes of a mouse's teeth. The hypothesis is a *jeu d'esprit*, like the opposite hypothesis about the mouse of Night. In these, and all the other current theories of the Sminthian Apollo, the widely diffused worship of ordinary mice, and such small deer, has been either wholly neglected or explained by the first theory of symbolism that occurred to the conjecture of a civilised observer. The facts of savage animal-worship, and their relations to totemism, were long unknown to, or unappreciated by, scholars, with the exception of Mr. Sayce, who recognised totemism as the origin of the zoomorphic element in Egyptian religion.

Our explanation, whether adequate or not, is not founded on an isolated case. If Apollo superseded and absorbed the worship of the mouse, he did no less for the wolf, the ram, the dolphin, and several other animals whose images were associated with his own. The Greek religion was more refined and anthropomorphic than that of Egypt. In Egypt the animals were still adored, and the images of the gods had bestial heads. In Greece only a few gods, and chiefly in very archaic statues, had bestial heads; but beside the other deities the sculptor set the owl, eagle, wolf, serpent, tortoise, mouse, or whatever creature was the local favourite of the deity.<sup>3</sup> Probably the deity had, in the majority of cases, superseded the animal and succeeded to his honours. But the conservative religious sentiment retained the beast within the courts and in the suit and service of the anthropomorphic god.<sup>4</sup>

<sup>1</sup> *De Iside et Osiride*, lxxvi.

<sup>2</sup> This hypothesis does not maintain that totemism prevailed in Greece during historic times. Though Plutarch mentions a Carian γέρων, the Ioxide, of Attic descent, which

• <sup>3</sup> *Zool. Myth.*, ii. 68.

• <sup>4</sup> *Melusine*, N.S. i.

concerns itself with the relations of human beings among each other, and with their relations to human beings in the past and in the future. But Philosophy has no distinct province of knowledge: it embraces the whole world of thought: it stands in the same relation to the various sciences as Geography stands to Topography. All the sciences subserve its purpose, furnish its life-blood. It systematises their results, co-ordinating their truths into a body of Doctrine.

Thus, while Theology claims to furnish a system of religious conceptions, and Science to furnish conceptions of the order of the world, Philosophy, detaching their widest conceptions from both, furnishes a Doctrine which contains an *explanation of the world and of human destiny*.

Although this may appear a novel definition, it will, on examination, be found to characterise the persistent function which in all times Philosophy has exercised. Moreover, it will be found applicable in special cases, such as the philosophy of Science, the philosophy of Religion, the philosophy of History, or the philosophy of Art. Thus, given a science with its generalities laboriously ascertained, the philosophy of that science will be the co-ordination of its highest truths, the methods by which those truths were reached, and the relation which both these bear to the truths and methods of other sciences. I formerly defined Philosophy "an attempt to explain the phenomena of the universe." This is too vague, and fails to mark the point of separation from Science and Theology; but, though vague, it expresses what has been the unconscious and persistent effort of philosophical speculation.

§ 5. Such is the relative position of each of the three great spiritual powers at the present time. These positions were not always thus sharply defined, but the history of thought exhibits a continuous development in these directions. Theology at first was absolute and autocratic, not only furnishing religious doctrine, but dictating generalities to Philosophy, and explanations of all but the commonest phenomena to Science. Philosophy served as a hand-maid to Theology, until she grew strong enough to think for herself. Science kept timidly aloof from all questions on which Theology had pronounced, and submitted to a peremptory order to be silent when her conclusions were unacceptable. Fortunately for Humanity, this creeping servitude was incompatible with the continued exercise of reason. As discoveries extended, as more and more phenomena were satisfactorily reduced to order, the widening reach of Inquiry embraced problem after problem, until now all the facts within human ken are assumed to be reducible to order on the scientific Method. With the growing strength came a growing courage, and timidity gave place to a proud self-reliance. Theology was first quietly yet firmly excluded from Cosmology, its explanations of the world being set aside as myths; then it was excluded from Biology; and now even Sociology is claimed as amenable to scientific Methods, because all social phenomena are seen to be under the dominion of law. History shows a curious reversal of the principle of accommodation. Just as Science was formerly compelled to accommodate its conclusions to Theology, no matter at what cost of consistency, with what sophistical excuses, so Theology is now

The process by which the god ousted the beasts may, perhaps, be observed in Samoa. There (as Dr. Turner tells us in his *Samoa*) each family has its own sacred animal, which it may not eat. If this law be transgressed, the malefactor is supernaturally punished in a variety of ways. But, while each family has thus its animal, four or five different families recognise, in owl, crab, lizard, and so on, incarnations of the same god, say of Tongo. If Tongo had a temple among these families, we can readily believe that images of the various beasts in which he was incarnate would be kept within the consecrated walls. Savage ideas like these, if they were ever entertained in Greece, would account for the holy animals of the different deities. But it is obvious that the phenomena which we have been studying may be otherwise explained. It may be said that the Sminthian Apollo was only

revered as the enemy and opponent of mice. St. Gertrude (whose heart was eaten by mice) has the same rôle in France.<sup>1</sup> The worship of Apollo, and the badge of the mouse, would, on this principle, be diffused by colonies from some centre of the faith. The images of mice in Apollo's temples would be nothing more than votive offerings. Thus, in the church of a Saxon town, the verger shows a silver mouse dedicated to Our Lady. "This is the greatest of our treasures," says the verger. "Our town was overrun with mice till the ladies of the city offered this mouse of silver. Instantly all the mice disappeared." "And are you such fools as to believe that the creatures went away because a silver mouse was dedicated?" asked a Prussian officer. "No," replied the verger, rather neatly, "or long ago we should have offered a silver Prussian."

revered asparagus, it is probable that genuine totemism had died out of Greece many hundreds of years before even Homer's time. But this view is not inconsistent with the existence of survivals in religion and ritual.

<sup>1</sup> Rolland, *Faune populaire*.

## V.

### STAR-MYTHS

ARTEMUS WARD used to say that, while there were many things in the science of astronomy hard to be understood, there was one fact which entirely puzzled him. He could partly perceive how we "weigh the sun," and ascertain the component elements of the heavenly bodies, by the aid of spectrum analysis. "But what beats me about the stars," he observed plaintively, "is how we come to know their names." This question, or rather the somewhat similar question, "How did the constellations come by their

very peculiar names?" has puzzled Professor Pritchard and other astronomers more serious than Artemus Ward. Why is a group of stars called the *Bear*, or the *Swan*, or the *Twins*, or named after the *Pleiades*, the fair daughters of the Giant Atlas?<sup>1</sup> These are difficulties that meet even children when they examine a "celestial globe." There

<sup>1</sup> The attempt is not to explain the origin of each separate name, but only of the general habit of giving animal or human names to stars.

compelled to accommodate its dicta to the conclusions of Science, by utterly distorting the meaning of words. After having for centuries pursued its researches under the denunciation of Theology, and under the burden of a fear, terrible to delicate consciences, of approaching heresy when it was seeking truth, Science has at length ceased its timorous and futile efforts to reconcile its conclusions with anything but its own principles.<sup>1</sup> The problem is no longer: Given a doctrine of indisputable authority, how to reconcile the conclusions of Experience with its dicta; the problem is: Given certain indisputable conclusions of Experience, how to reconcile the dicta of an ancient doctrine with these irresistible conclusions.<sup>2</sup>

§ 6. The conflict was inevitable, and was foreseen from the first. Inevitable, because the two powers are characterised by two different Methods, that of Theology being the Subjective, that of Science the Objective. These Methods will have to be considered more particularly in a future section; for the present, I merely call attention to the fact of their opposition, and to the fact that

<sup>1</sup> In 1864 was seen a memorable protest, on the part of scientific men, against every attempt to control their researches. In spite of the theological pressure, which is so powerful in England, our leading savans openly and *indignantly* refused to sign a declaration of dependence.

<sup>2</sup> A somewhat analogous inversion has taken place in the social problem. Formerly the problem was: Given the welfare and advantages of the Few, how best to reconcile with these the welfare of the Many; it now is: Given the welfare of the Many, how best to secure the advantages of the Few. The new Astronomy transferred the centre of the world from the small Earth to the mighty Sun; the new Sociology transfers the centre of social life from the small group of *Idlers* to the mighty mass of *Workers*.

Philosophy occupying an intermediate position has necessarily employed both Methods by turns. When it was in alliance with Theology, it adopted the Subjective Method: this was during its ontological phase. When the advance of Science furnished it with more and more material, Philosophy gradually detached itself more and more from Theology, without, however, consciously and completely adopting the Objective Method: this was its psychological phase. Finally, the all-embracing progress of Science has forced Philosophy frankly to adopt the Objective Method: this is its present phase, the Positive Philosophy.

The history of Philosophy is the narrative of its emancipation from Theology and its final constitution through the transformation of Science.

§ 7. The annals are red with the flames of persecuting wrath at every attempt Philosophy made to assert independence. Naturally enough. No autocrat can be lenient to a powerful pretender; and the more reasonable the pretender's claim, the more hateful will be its assertion. Philosophy, in turn, was equally intolerant of its rival Science, and allied itself with its ancient persecutor to persecute the new pretender.

Aloof from the strife of polemics and personal irritations, the wise, calm spirits of our day resign themselves to the Triumvirate, defining for each its separate province, and trusting in a harmony of combined effort which hitherto has been impossible. It is time that the great perturbations should cease, and the only struggles be carried on within the limits of each domain: theologians in controversy with theologians, savans with savans, philosophers with philosophers. The three powers

they find the figure of a bear, traced out with lines in the intervals between the stars of the constellations, while a very imposing giant is so drawn that Orion's belt just fits his waist. But when he comes to look at the heavens, the infant speculator sees no sort of likeness to a bear in the stars, nor anything at all resembling a giant in the neighbourhood of Orion. The most eccentric modern fancy, which can detect what shapes it will in clouds, is unable to find any likeness to human or animal forms in the stars; and yet we call a great many of the stars by the names of men and beasts and gods. Some resemblance to terrestrial things, it is true, everyone can behold in the heavens. *Corona*, for example, is like a crown, or, as the Australian black fellows know, it is like a boomerang, and we can understand why they give it the name of that curious curved missile. The *Milky Way*, again, does resemble a path in the sky; our English ancestors called it *Watling Street*—the path of the *Watlings*, mythical giants—and Bushmen in Africa and Red Men in North America name it the “ashen path” or “the path of souls.” The ashes of the path, of course, are supposed to be hot and glowing, not dead and black like the ash-paths of modern running-grounds. Other and more recent names for certain constellations are also intelligible. In Homer's time the Greeks had two names for the *Great Bear*; they called it the *Bear*, or the *Wain*. and a certain fanciful likeness to a wain may be made out, though no resemblance to a bear is manifest. In the United States the same constellation is popularly styled the *Dipper*, and everyone may observe the likeness to a dipper or toddy-ladle.

But these resemblances take us only a little way towards appellations. We know that we derive many of the names straight from the Greek; but whence did the Greeks get them? Some, it is said, from the Chaldaeans; but whence did they reach the Chaldaeans? To this we shall return later; but, as to early

Greek star-lore, Goguet, the author of *L'Origine des Lois*, a rather learned but too speculative work of the last century, makes the following characteristic remarks: “The Greeks received their astronomy from Prometheus. This prince, as far as history teaches us, made his observations on Mount Caucasus.” That was the eighteenth century's method of interpreting mythology. The myth preserved in the *Prometheus Bound* of Aeschylus tells us that Zeus crucified the Titan on Mount Caucasus. The French philosopher, rejecting the supernatural elements of the tale, makes up his mind that Prometheus was a prince of a scientific bent, and that he established his observatory on the frosty Caucasus. But, even admitting this, why did Prometheus give the stars animal names? Goguet easily explains this by a hypothetical account of the manners of primitive men. “The earliest peoples,” he says, “must have used writing for purposes of astronomical science. They would be content to design the constellations of which they wished to speak by the hieroglyphical symbols of their names; hence the constellations have insensibly taken the names of the chief symbols.” Thus, a drawing of a bear or a swan was the hieroglyphic of the name of a star, or group of stars. But whence came the name which was represented by the hieroglyphic? That is precisely what our author forgets to tell us. But he remarks that the meaning of the hieroglyphic came to be forgotten, and “the symbols gave rise to all the ridiculous tales about the heavenly signs.” This explanation is attained by the process of reasoning in a vicious circle from hypothetical premises ascertained to be false. All the known savages of the world, even those which have scarcely the elements of picture-writing, call the constellations by the names of men and animals, and all tell “ridiculous tales” to account for the names.

As the star-stories told by the Greeks, the ancient Egyptians, and other

have always hitherto been in a state of conflict or of armed peace. The problem of our age is, how to change this conflict into a concourse, to unite the independent and dissident efforts in dependent and harmonious efforts. This problem may be solved by the transformation of Science into Philosophy, and by the transformation of Philosophy into Religion. But whether we reject or accept that solution, the systematisation of our religious conceptions and all its practical applications must be a distinct office from the systematisation of our conceptions of the order of phenomena; and the harmony of the two can only be effected by a Doctrine which combines the generalities of both. The future of Philosophy is in this task of reconciliation.

§ 8. In the early editions of my *History* the word Philosophy carried a more restricted meaning than is assigned to it in the preceding paragraphs. It was used as synonymous with Metaphysics, or more specially with Ontology. That restricted use of the word was forced on me by the practice of all previous historians, and I stated why it was forced upon me, and in what sense the word was to be understood. In vain. The old vague, indissoluble associations could not be escaped. The reader quickly forgot my explanation, and interpreted the word in his vague sense, instead of in my restricted sense. The large latitude in which the word has come to be used all over Europe has obliterated all special meaning, and this notably in England, where, as Hegel sarcastically remarks, microscopes and barometers are dignified as "philosophical instruments," Newton is styled a philosopher, and even parliamentary

proceedings are sometimes said to be philosophical.<sup>1</sup> In presence of such looseness of expression what was the historian to do? Obviously, he could only declare the sense in which the word was used in other histories of Philosophy, and abide by that. Had I not fixed a precise meaning to the word, I must have written a *History of Knowledge*, not a *History of Philosophy*.

My explanation was of little avail. The object of my work being to show the essential futility of Philosophy, in the restricted sense of that word, I was supposed to have intended a crusade against Philosophy in the wider sense; and readers who no more believed in Ontology than I did were startled by my attacks on it under the name of Philosophy. After this experience I cannot place much reliance on the security of any definition; but for the sake of attentive readers I have stated what position Philosophy holds in relation to Theology and Science; and to avoid equivoque I shall use the words Metaphysical Philosophy, or Ontology, and sometimes simply Metaphysics, to designate inquiries on the Subjective Method into the ultimate essence of things.

§ 9. Unhappily there is no uniformity even in the use of the term Metaphysics. Sometimes it means Ontology. Sometimes it means Psychology. Sometimes it means the highest generalities of Physics. The first of these inquiries I hold to be utterly futile, hopelessly beyond human ken. But the second and third are legitimate inquiries, which take their place in human knowledge whenever they are pursued on the Objective Method, and only deserve

<sup>1</sup> Hegel: *Geschichte der Philosophie*, i. 72. Compare also Hamilton, *Metaphysics*, i. 63.

civilised peoples of the old world, exactly correspond in character, and sometimes even in incident, with the star-stories of modern savages, we have the choice of three hypotheses to explain this curious coincidence. Perhaps the star-stories, about nymphs changed into bears, and bears changed into stars, were invented by the civilised races of old, and gradually found their way amongst people like the Eskimo, and the Australians, and Bushmen. Or it may be insisted that the ancestors of Australians, Eskimo, and Bushmen were once civilised like the Greeks and Egyptians, and invented star-stories, still remembered by their degenerate descendants. These are the two forms of the explanation which will be advanced by persons who believe that the star-stories were originally the fruit of the civilised imagination. The third theory would be that the "ridiculous tales" about the stars were originally the work of the savage imagination, and that the Greeks, Chaldeans, and Egyptians, when they became civilised, retained the old myths that their ancestors had invented when they were savages. In favour of this theory it may be said, briefly, that there is no proof that the fathers of Australians, Eskimo, and Bushmen had ever been civilised; while there is a great deal of evidence to suggest that the fathers of the Greeks had once been savages.<sup>1</sup> And, if we incline to the theory that the star-myths are the creation of savage fancy, we at once learn why they are, in all parts of the world, so much alike. Just as the flint and bone weapons of rude races resemble each other much more than they resemble the metal weapons and the artillery of advanced peoples, so the mental products, the fairy-tales and myths, of rude races have everywhere a strong family resemblance. They are produced by men in similar

mental conditions of ignorance, curiosity, and credulous fancy, and they are intended to supply the same needs, partly of amusing narrative, partly of crude explanation of familiar phenomena.

Now it is time to prove the truth of our assertion that the star-stories of savage and of civilised races closely resemble each other. Let us begin with that well-known group the *Pleiades*. The peculiarity of the *Pleiades* is that the group consists of seven stars, of which one is so dim that it seems entirely to disappear, and many persons can only detect its presence through a telescope. The Greeks had a myth to account for the vanishing of the lost Pleiad. The tale is given in the *Catalsterismoi* (stories of metamorphoses into stars), attributed to Eratosthenes. This work was probably written after our era; but the author derived his information from older treatises now lost. According to the Greek myth, then, the seven stars of the *Pleiad* were seven maidens, daughters of the Giant Atlas. Six of them had gods for lovers; Poseidon admired two of them, Zeus three, and Ares one; but the seventh had only an earthly wooer, and when all of them were changed into stars the maiden with the mortal lover hid her light for shame.

Now let us compare the Australian story. According to Mr. Dawson (*Australian Aborigines*), a writer who understands the natives well, "their knowledge of the heavenly bodies greatly exceeds that of most white people," and "is taught by men selected for their intelligence and information. The knowledge is important to the aborigines on their night journeys"; so we may be sure that the natives are careful observers of the heavens, and are likely to be conservative of their astronomical myths. The "Lost Pleiad" has not escaped them, and this is how they account for her disappearance. The *Pirt Kopan noot* tribe have a tradition that the *Pleiades* were a queen and her six attendants. Long ago the *Crow* (our *Canopus*) fell in love with the

<sup>1</sup> Mr. Herbert Spencer believes that the Australians were once more civilised than at present. But there has never been found a trace of pottery on the Australian continent, which says little for their civilisation in the past.

reproof when pursued on the Subjective Method, upon which *all* problems are insoluble. As I have shown at some length elsewhere,<sup>1</sup> all problems are legitimate which admit Verification of their premisses and conclusions; and no Verification is possible except on the Objective Method.

§ 10. In the arrangement of Aristotle's treatises, those which succeeded the Physics were called *τὰ μετὰ τὰ φυσικὰ βιβλία*—indicating that they were to be studied *after* the Physics, either because their topics were evolved from physical inquiries, or because their topics were beyond physical inquiry. The equivoque still continues. Metaphysics may concern itself with the last conclusions of Physics, dealing with these results as its elements; or it may concern itself with inquiries beyond the region of Experience, entirely removed from Verification, transcending Sense, and drawing its data from a higher source. Obviously, in proportion as it seeks its elements in the relations of sensible phenomena it forms one branch of legitimate inquiry, and the only question then is as to the validity of the Method it employs. In proportion as it seeks its elements in the relations of supersensible phenomena it separates itself from Experience, ceases to be amenable to the ordinary canons of Research, and grounds its existence on the possession of a peculiar criterion—a direct and immediate knowledge of the Absolute.

The confusion of these two distinct conceptions is very common, and is the source of much perplexity. Those who hold the doctrine of the relativity of knowledge may admit without incon-

sistency many principles which are metaphysical in the sense of transcending Experience in their generality, although founded on Experience and conformable with it: such, for example, are causality and inertia. There is a large admixture of such Metaphysics, in all philosophical Physics; and in this sense we may call Metaphysics the *prima philosophia*. But Experience is here the source and pattern: the Objective Method with its rigorous tests of Verification rules as absolutely here as in every other department of positive inquiry. The Unknown is only a prolongation of the Known, and is trusted only so far as it is in strict conformity with the Known. The Invisible is but the generalisation of the Visible.

Those who hold that, over and above the conceptions furnished through Experience, the mind brings with it certain conceptions antecedent to and independent of Experience, who hold that, over and above our relative knowledge, we have absolute knowledge, *reverse* this procedure from the Known and Visible to the Unknown and Invisible; and starting from what their rivals declare to be not simply the Unknown but the Unknowable, they deduce from it certain conclusions which they present as ontological truths capable of guiding us in discovering the relations of phenomena. Let Descartes be heard on this point: “*Perspicuum est optimam philosophandi viam nos sequuturos, si ex ipsis Dei cognitione, rerum ab eo creatarum explicationem deducere conemur, ut ita scientiam perfectissimam, quae est effectuum, per causas acquiramus.*”<sup>2</sup> The fallacy lies in concluding that because, in Mathematics

<sup>1</sup> Aristotle, chap. iv.

<sup>2</sup> Descartes: *Princip. Philos.* ii. § 22.

queen, who refused to be his wife. The *Crow* found that the queen and her six maidens, like other Australian *gins*, were in the habit of hunting for white edible grubs in the bark of trees. The *Crow* at once changed himself into a grub (just as Jupiter and Indra used to change into swans, horses, ants, or what not) and hid in the bark of a tree. The six maidens sought to pick him out with their wooden hooks, but he broke the points of all the hooks. Then came the queen with her pretty bone hook; he let himself be drawn out, took the shape of a giant, and ran away with her. Ever since there have only been six stars—the six maidens—in the *Pleiad*. This story is well known, by the strictest inquiry, to be current among the blacks of the West District and South Australia.

Mr. Tylor, whose opinion is entitled to the highest respect, thinks that this may be a European myth, told by some settler to a black in the Greek form, and then spread about among the natives. He complains that the story of the loss of the *brightest* star does not fit the facts of the case.

We do not know, and how can the Australians know, that the lost star was once the brightest? It appears to me that the Australians, remarking the disappearance of a star, might very naturally suppose that the *Crow* had selected for his wife that one which had been the most brilliant of the cluster. Besides, the wide distribution of the tale among the natives, and the very great change in the nature of the incidents, seem to point to a native origin. Though the main conception—the loss of one out of seven maidens—is identical in Greek and in *Murri*, the manner of the disappearance is eminently Hellenic in the one case, eminently savage in the other. However this may be, nothing, of course, is proved by a single example. Let us next examine the stars *Castor* and *Pollux*. Both in Greece and in Australia these are said once to have been two young men. In the *Catasterismoi*, already spoken of, we read: "The *Twins*,

or *Dioscouroi*—They were natured in Lacedaemon, and were famous for their brotherly love, wherefore Zeus, desiring to make their memory immortal, placed them both among the stars." In Australia, according to Mr. Brough Smyth (*Aborigines of Victoria*), *Turree* (*Castor*) and *Wanjel* (*Pollux*) are two young men who pursue *Purra* and kill him at the commencement of the great heat. *Cooner toorung* (the mirage) is the smoke of the fire by which they roast him. In Greece it was not *Castor* and *Pollux*, but *Orion*, who was the great hunter placed among the stars. Among the Bushmen of South Africa, *Castor* and *Pollux* are not young men, but young women, the wives of the *Ilband*, the great native antelope. In Greek star-stories the *Great Bear* keeps watch, Homer says, on the hunter *Orion* for fear of a sudden attack. But how did the Bear get its name in Greece? According to Hesiod, the oldest Greek poet after Homer, the Bear was once a lady, daughter of *Lycanon*, King of Arcadia. She was a nymph of the train of chaste *Artemis*, but yielded to the love of *Zeus*, and became the ancestress of all the Arcadians.<sup>1</sup> Changed by *Zeus* to a bestial form, she was shot by *Artemis*, and then translated by *Zeus* to the stars (Apollod., iii. 8; Eustath., 1156; Bachofen, *Der Bär*, p. 14).<sup>2</sup> Here we must notice, first, that the Arcadians, like Australians, Red Indians, and other wild races, and like the Bedouins, believed themselves to be descended from a girl who became an animal. That the early Egyptians did the same is not improbable; for names of animals are found among the ancestors in the very oldest genealogical papyrus,<sup>3</sup> as in the genealogies of the old English kings. Next the

<sup>1</sup> See C. O. Müller (*Proleg. zur Mythol.*, Engl. transl., p. 17): "Callisto is just nothing else than Artemis and her sacred animal comprehended in one idea." See also pp. 201-4. Müller (C. O.) very nearly made the discovery that the gods of Greece may, in some cases, have bestial connections.

<sup>2</sup> Brugsch, *History of Egypt*, i. 22.

and all deductive operations, we unfold the particulars contained implicitly in the generalities, we should therefore always seek-particulars in this way. But the procedure is only justifiable when the generalities are proved to be indisputably true, and when the particulars deduced are by Verification shown to be really as well as verbally contained in them. Now, what are the chief objects of absolute knowledge, the generalities from which ontologists deduce? They are God, Freedom, Immortality, Causality, Existence: the noumena of which all the manifold experiences are phenomena.<sup>1</sup> That it is possible to *infer* these, no one denies; but their value as inferences opens an interminable discussion. The ontologists claim to *know* them directly, immediately, certainly. Their opponents affirm—and endeavour psychologically to prove—that such knowledge is impossible, and that, if possible, it would be infertile, because incapable of being applied to the problems of phenomena except through Experience; infertile, because it can only be a comparison of ideas with ideas, never of ideas with facts; and thus stumbles over the old sceptical objection—τίς κρινέτ τὸν ὑγιεινόν. Suppose, for example, that antecedently to all Experience we know the general law of Causality, it is only through Experience we can enrich this knowledge. We may know that every effect has a cause; this knowledge we may have brought with us into our phenomenal life; but what concerns us is, to know the particular cause of each particular effect, and, if we can ascertain that, the general axiom may be disregarded; if we cannot

ascertain that, the general axiom is powerless.

§ 11. The valid objection against Metaphysics is not so much against the subjects of inquiry as against the Method of inquiry; if the Method were legitimate, its results would be legitimated. I shall consider this Method by-and-bye; for the present I invoke the unequivocal verdict of History, which pronounces it to be the prolonged impotence of two thousand years and all its results, as shifting as the visionary phantoms of reverie. When we are awake, says Aristotle, we have a world in common; when we dream, each has his own. Kant aptly applies this to metaphysicians; “when we find a variety of men having various worlds, we may conclude them to be dreaming.” It is because the majority of thinking men have been convinced that inquiries conducted on the Metaphysical Method are but as dreams, that they have everywhere in Europe fallen into discredit. Once the pride and glory of the greatest intellects, and still forming an important element of liberal culture, the present decadence of Metaphysics is attested no less by the complaints of its few followers than by the thronging ranks of its opponents. Few now believe in its large promises; still fewer devote to it that passionate patience which is devoted by thousands to Science. Every day the conviction gains strength that Metaphysics is condemned, by the very nature of its Method, to wander for ever in one tortuous labyrinth, within whose circumscribed and winding spaces weary seekers are continually finding themselves in the trodden tracks of predecessors who could find no exit.

Metaphysical Philosophy has been ever in movement, but the movement

<sup>1</sup> Εστιν ἐπιστήμη τις ή θεωρεῖ τὸ δν ή δν καὶ τὰ τούτῳ ὑπάρχοντα καθ αὐτό. Aristotle: *Met.* iii. 1.

Arcadians transferred the ancestral bear to the heavens, and in doing this they resembled the Peruvians, of whom Acosta says: "They adored the star *Urchuchilly*, feigning it to be a *Ram*, and worshipped two others, and say that one of them is a *sheep*, and the other a *lamb*.....others worshipped the star called the *Tiger*. They were of opinion that there was not any beast or bird upon the earth, whose shape or image did not shine in the heavens."

But to return to our bears. The Australians have, properly speaking, no bears, though the animal called the native bear is looked up to by the aborigines with superstitious regard. But among the North American Indians, as the old missionaries, Lafitau and Charlevoix, observed, "the four stars in front of our constellation are a bear; those in the tail are hunters who pursue him; the small star apart is the pot in which they mean to cook him."

It may be held that the Red Men derived their bear from the European settlers. But, as we have seen, an exact knowledge of the stars has always been useful, if not essential, to savages; and we venture to doubt whether they would confuse their nomenclature and sacred traditions by borrowing terms from trappers and squatters. But, if this is improbable, it seems almost impossible that all savage races should have borrowed their whole conception of the heavenly bodies from the myths of Greece. It is thus that Egede, a missionary of the last century, describes the Eskimo philosophy of the stars: "The notions that the Greenlanders have as to the origin of the heavenly lights—as sun, moon, and stars—are very nonsensical; in that they pretend they have formerly been as many of their own ancestors, who, on different accounts, were lifted up to heaven, and became such glorious celestial bodies." Again, he writes: "Their notions about the stars are that some of them have been men, and others different sorts of animals and fishes." But every reader of Ovid

knows that this was the very mythical theory of the Greeks and Romans. The Egyptians, again, worshipped Osiris, Isis, and the rest as *ancestors*; and there are even modern scholars, like Mr. Loftie in his *Essay of Scarabs*, who hold Osiris to have been originally a real historical person. But the Egyptian priests who showed Plutarch the grave of Osiris showed him, too, the stars into which Osiris, Isis, and Horus had been metamorphosed. Here, then, we have Greeks, Egyptians, and Eskimo, all agreed about the origin of the heavenly lights; all of opinion that "they have formerly been as many of their own ancestors."

The Australian general theory is: "Of the good men and women, after the deluge, Pundjel (a kind of Zeus, or rather a sort of Prometheus, of Australian mythology) made stars. Sorcerers (*Biraark*) can tell which stars were once good men and women." Here the sorcerers have the same knowledge as the Egyptian priests. Again, just as among the Arcadians, "the progenitors of the existing tribes, whether birds, or beasts, or men, were set in the sky, and made to shine as stars."<sup>1</sup>

We have already given some Australian examples in the stories of the *Pleiades*, and of *Castor* and *Pollux*. We may add the case of the *Eagle*. In Greece the *Eagle* was the bird of Zeus who carried off Ganymede to be the cup-bearer of Olympus. Among the Australians this same constellation is called *Totyarguil*; he was a man who, when bathing, was killed by a fabulous animal, a kind of kelpie, as Orion, in Greece, was killed by the *Scorpion*. Like Orion, he was placed among the stars. The Australians have a constellation named *Eagle*, but he is our *Sirius*, or *Dog-star*.

The Indians of the Amazon are in one tale with the Australians and Eskimo. "Dr. Silva de Coutinho informs me," says Professor Hartt,<sup>2</sup> "that the Indians

<sup>1</sup> Brough Smyth.

<sup>2</sup> *Amazonian Tortoise Myths*, p. 39. Cf. for Australian mythology, Howitt, *Native Tribes of South-Eastern Australia*.

has been circular; and this fact is thrown into stronger relief by contrast with the linear progress of Science. Instead of perpetually finding itself, after years of gigantic endeavour, returned to the precise point from which it started, Science finds itself, year by year, and almost day by day, advancing step by step, each accumulation of power adding to the momentum of its progress; each evolution, like the evolutions of organic development, bringing with it a new functional superiority, which in its turn becomes the agent of higher developments. Not a fact is discovered but has its bearing on the whole body of doctrine; not a mechanical improvement in the construction of instruments but opens fresh sources of discovery. Onward, and for ever onward, mightier and for ever mightier, rolls this wondrous tide of discovery. While the first principles of Metaphysical Philosophy are to this day as much a matter of dispute as they were two thousand years ago,<sup>1</sup> the first principles of Science are securely established, and form the guiding lights of European progress. Precisely the same questions are agitated in Germany at the present moment that were agitated in ancient Greece; and with no more certain Methods of solving them, with no nearer hopes of ultimate success. The History of Philosophy presents the spectacle of thousands of intellects—some the greatest

<sup>1</sup> "C'est la honte éternelle de la philosophie de n'avoir pas jusqu'à présent mis au jour un résultat positif, un principe une fois pour toute reconnu et universellement admis. Bien mieux, il n'y a pas même un résultat négatif, une défaite complète, irrévocable d'une doctrine si réfutée qu'elle soit."—Delbœuf: *Essai de Logique Scientifique*, Liège, 1865, p. 10. Compare Kant: *Prolegomena zu einer jeden künftigen Metaphysik*, passim.

that have made our race illustrious—steadily concentrated on problems believed to be of vital importance, yet producing no other result than a conviction of the extreme facility of error, and the remoteness of any probability that Truth can be reached.<sup>1</sup> The only conquest has been *critical*—that is to say, psychological. Vainly do some argue that Philosophy has made no progress hitherto, because its problems are complex, and require more effort than the simpler problems of Science; vainly are we warned not to conclude from the past to the future, averring that no progress will be made because no progress has been made. Perilous as it must ever be to set absolute limits to the future of human capacity, there can be no peril in averring that Metaphysics never will achieve its aims, because those aims lie beyond all scope. The difficulty is impossibility. No progress can be made because no basis of certainty is possible. To aspire to the knowledge of more than phenomena—their resemblances, co-existences, and successions—is to aspire to transcend the inexorable limits of human faculty. To *know* more, we must *be* more.

In the early days of speculation all Philosophy was essentially metaphysical, because Science had not emerged from Common Knowledge to claim theoretical jurisdiction. The particular sciences then cultivated, no less than the higher

<sup>1</sup> Compare Kant in the preface to the 2nd ed. of the *Kritik der reinen Vernunft*: "Der Metaphysik.....ist das Schicksal bisher noch so günstig nicht gewesen, dass sie den sichern Gang einer Wissenschaft einzuschlagen vermocht hätte; ob sie gleich älter ist als alle übrigen. ....Es ist also kein Zweifel, dass ihr Verfahren bisher ein blosses Herumtappen und, was das Schlimmste ist, unter blossen Begriffen gewesen sei."

of the Amazon not only give names to many of the heavenly bodies, but also tell stories about them. The two stars that form the shoulders of Orion are said to be an old man and a boy in a canoe, chasing a *peixe boi*, by which name is designated a dark spot in the sky near the above constellation." The Indians also know monkey-stars, crane-stars, and palm-tree stars.

The Bushmen, almost the lowest tribe of South Africa, have the same star-lore and much the same myths as the Greeks, Australians, Egyptians, and Eskimo. According to Dr. Bleek, "stars, and even the sun and moon, were once mortals on earth, or even animals or inorganic substances, which happened to get translated to the skies. The sun was once a man whose arm-pit radiated a limited amount of light round his house. Some children threw him into the sky, and there he shines." The Homeric hymn to Helios, in the same way, as Mr. Max Muller observes, "looks on the sun as a half-god, almost a hero, who had once lived on earth." The pointers of the Southern Cross were "two men who were lions," just as Callisto, in Arcadia, was a woman who was a bear. It is not at all rare in those queer philosophies, as in that of the Scandinavians, to find that the sun or moon has been a man or woman. In Australian fable the moon was a man, the sun a woman of indifferent character, who appears at dawn in a coat of red kangaroo skins, the present of an admirer. In an old Mexican text the moon was a man, across whose face a god threw a rabbit, thus making the marks in the moon.<sup>1</sup>

Many separate races seem to recognise the figure of a hare where we see "the Man in the Moon." In a Buddhist legend an exemplary and altruistic hare was translated to the moon. "To the common people in India the spots on the moon look like a hare, and Chandras, the god of the moon, carries a hare; hence the moon is called *sasina*

or *sasanka*, hare-mark. The Mongolians also see in these shadows the figure of a hare."<sup>2</sup> Among the Eskimo the moon is a girl, who always flees from her cruel brother, the sun, because he disfigured her face. Elsewhere the sun is the girl, beloved by her own brother, the moon; she blackens her face to avert his affection. On the Rio Branco, and among the Tomunda, the moon is a girl who loved her brother, and visited him in the dark. He detected her wicked passion by drawing his blackened hand over her face. The marks betrayed her, and, as the spots on the moon, remain to this day.<sup>2</sup>

Among the New Zealanders and North American Indians the sun is a great beast, whom the hunters trapped and thrashed with cudgels. His blood is used in some New Zealand incantations, and, according to an Egyptian myth, was kneaded into clay at the making of man. But there is no end to similar sun-myths, in all of which the sun is regarded as a man, or even as a beast.

To return to the stars:

The Red Indians, as Schoolcraft says, "hold many of the planets to be transformed adventurers." The Iowas "believed stars to be a sort of living creatures." One of them came down and talked to a hunter, and showed him where to find game. The Gallinomeros of Central California, according to Mr. Bancroft, believe that the sun and moon were made and lighted up by the Hawk and the Coyote, who one day flew into each other's faces in the dark, and were determined to prevent such accidents in the future. But the very oddest example of the survival of the notion that the stars are men or women is found in the *Pax* of Aristophanes. Trygaeus in that comedy has just made an expedition to heaven. A slave meets him, and asks him, "Is not the story true, then, that we become stars when we die?" The

<sup>1</sup> Grimm, *D. M.*, Eng. trans., p. 716.

<sup>2</sup> Hartt, *op. cit.*, p. 40. For a modern sun-man and his myth in the Cyclades, see J. T. Bent, in the *Athenaeum*, January 17th, 1885.

generalities on Life, Destiny, and the Universe, were studied on one and the same Method; but in the course of evolution a second Method grew up, at first timidly and unconsciously, gradually enlarging its bounds as it enlarged its powers, and at last separating itself into open antagonism with its parent and rival. The child then destroyed its parent; as the mythic *Zeus*, calling the Titans to his aid, destroyed Saturn and usurped his throne. The Titans of the new Method were Observation and Experiment.

There are many who deplore the encroachment of Science, fondly imagining that Metaphysical Philosophy would respond better to the higher wants of man. This regret is partly unreasoning sentiment, partly ignorance of the limitations of human faculty. Even among those who admit that Ontology is an impossible attempt, there are many who think it should be preserved in, because of the "lofty views" it is supposed to open to us. This is as if a man desirous of going to America should insist on walking there, because journeys on foot are more poetical than journeys by steam; in vain is he shown the impossibility of crossing the Atlantic on foot; he admits that grovelling fact, but his lofty soul has visions of some mysterious overland route by which he hopes to pass. He dies without reaching America; but to the last gasp he maintains that he has discovered the route on which others may reach it.

Let us hear no more of the lofty views claimed as the exclusive privilege of Metaphysics. Ignorant indeed must be the man who nowadays is unacquainted with the grandeur and sweep of scientific speculation in Astronomy and Geology, or who has never been thrilled by the

revelations of the telescope and microscope. The heights and depths of man's nature, the heights to which he aspires, the depths into which he searches, and the grander generalities on Life, Destiny, and the Universe, find as eminent a place in Science as in Metaphysics. And even were we compelled to acknowledge that lofty views were excluded from Science, the earnest mind would surely barter such loftiness for Truth? Our struggle, our passion, our hope, is for Truth, not for loftiness; for sincerity, not for pretence. If we cannot reach certain heights, let us acknowledge them to be inaccessible, and not deceive ourselves and others by phrases which pretend that these heights are accessible. Bentham warns us against "question-begging epithets"; and one of these is the epithet "lofty," with which Metaphysical Philosophy allures the unwary student. As a specimen of the sentiment so inappropriately dragged in to decide questions not of sentiment but of truth, consider the following passage delivered from the professorial chair to students whose opinions were to be formed:—

"A spirit of most misjudging contempt has for many years become fashionable towards the metaphysical contemplations of the elder sages. Alas! I cannot understand on what principles. Is it, then, a matter to be exulted in, that we have at length discovered that our faculties are only formed for earth and earthly phenomena? Are we to rejoice at our own limitations, and delight that we can be cogently demonstrated to be prisoners of sense and the facts of sense? In those early struggles after a higher and more perfect knowledge, and in the forgetfulness of every inferior science through the very ardour of the pursuit,

answer is, "Certainly"; and Trygæus points out the star into which Ion of Chios has just been metamorphosed. Aristophanes is making fun of some popular Greek superstition. But that very superstition meets us in New Zealand. "Heroes," says Mr. Tylor, "were thought to become stars of greater or less brightness, according to the number of their victims slain in fight."

The Aryan race is seldom far behind when there are ludicrous notions to be credited or savage tales to be told. We have seen that Aristophanes, in Greece, knew the Eskimo doctrine, that stars are souls of the dead. The Persians had the same belief;<sup>1</sup> "all the unnumbered stars were reckoned ghosts of men."<sup>2</sup> The German folklore clings to the same belief: "Stars are souls; when a child dies God makes a new star." Kaegi quotes<sup>3</sup> the same idea from the Veda, and from the Satapatha Brahmana the thoroughly Australian notion that "good men become stars." For a truly savage conception it would be difficult, in South Africa or on the Amazons, to beat the following story from the *Aitareya Brahmana* (iii. 33). Pragapati, the Master of Life, conceived an incestuous passion for his own daughter. Like Zeus, and Indra, and the Australian woer in the Pleiad tale, he concealed himself under the shape of a beast, a roebuck, and approached his own daughter, who had assumed the form of a doe. The gods, in anger at the awful crime, made a monster to punish Pragapati. The monster sent an arrow through the god's body; he sprang into heaven, and, like the Arcadian bear, this Aryan roebuck became a constellation. He is among the stars of Orion; and his punisher, also now a star, is, like the Greek Orion, a hunter. The daughter of Pragapati; the doe, became another constellation, and the avenging arrow is also a set of stars in the sky. What

follows, about the origin of the gods called Adityas, is really too savage to be quoted by a chaste mythologist.

It would be easy to multiply examples of this stage of thought among Aryans and savages. But we have probably brought forward enough for our purpose, and have expressly chosen instances from the most widely separated peoples. These instances, it will perhaps be admitted, suggest, if they do not prove, that the Greeks had received from tradition precisely the same sort of legends about the heavenly bodies as are current among Eskimo and Bushmen, New Zealanders and Iowas. As much, indeed, might be inferred from our own astronomical nomenclature. We now give to newly-discovered stars names derived from distinguished people, as *Georgium Sidus*, or *Herschel*; or, again, merely technical appellatives, as *Alpha*, *Beta*, and the rest. We should never think, when some "new planet swims into our ken," of calling it *Kangaroo*, or *Rabbit*, or after the name of some hero of romance, as *Rob Roy* or *Count Fosco*. But the names of stars which we inherit from Greek mythology—the *Bear*, the *Pleiades*, *Castor* and *Pollux*, and so forth—are such as no people in our mental condition would originally think of bestowing. When Callimachus pretended that the golden locks of Berenice were raised to the heavens, that was a mere piece of flattery constructed on the inherited model of legends about the crown (*Corona*) of Ariadne. It seems evident enough that the older Greek names of stars are derived from a time when the ancestors of the Greeks were in the mental and imaginative condition of Iowas, Kanekas, Bushmen, Murri, and New Zealanders. All these, and all other savage peoples, believe in a kind of equality and intercommunion among all things animate and inanimate. Stones are supposed in the Pacific Islands to be male and female, and to propagate their species. Animals are believed to have human or superhuman intelligence,

<sup>1</sup> Kaegi, *Der Rig Veda*, p. 217.

<sup>2</sup> *Mainjo-i-Khard*, 49, 22, ed. West.

<sup>3</sup> *Op. cit.*, p. 98.

there is at least a glorious, an irresistible testimony to the loftier destinies of man; and it might almost be pronounced that in *such* a view, their very errors evidence a truth higher than all our discoveries can disclose! When Lord Bacon, with his clear and powerful reasonings, led our thinkers from these ancient regions of thought (then newly opened to the modern world) to the humbler but more varied and extensive department of inductive inquiry, I represent to myself that angel-guide, all light and grace, who is pictured by our great poet as slowly conducting the first of our race from Paradise, to leave him in a world, vast, indeed, and varied, but where thorns and thistles abounded, and food—often uncertain and often perilous—was to be gained only by the sweat of the brow and in the downcast attitude of servile toil.”<sup>1</sup>

It would be an insult to the reader's understanding to answer the several absurdities and “question-begging” posi-

tions of this passage, which, however, is typical of much that may be read in many writers. Contempt for the speculations of the elder sages, or indeed of moderns, is a feeling we should be slow to acknowledge, whatever estimate we formed of their truth. If my polemical tone against a Method I believe to be not only hopeless but nowadays pernicious has sometimes seemed to warrant such an accusation, let me, on personal no less than philosophic grounds, rebut it here. The memory of long, laborious study, ever baffled, ever renewed, would alone suffice to create sympathy and respect for all earnest seekers; and if this feeling were not present, the Positive Philosophy would suffice, pointing as it does to all the great metaphysicians as necessary precursors, without whose labours Science would never have existed. It is not because the noble pioneers have perished in the trenches that their renown should fade. If we make a bridge of their dead bodies, we should raise a monument to their devotion.

<sup>1</sup> Archer Butler: *Lectures on the Hist. of Ancient Philosophy*, ii. 109.

## II.—THE OBJECTIVE AND SUBJECTIVE METHODS

§ 12. A SPANISH metaphysician truly says that the question of Method rules, and in one sense comprehends, all philosophical questions, being indeed Philosophy in action.<sup>2</sup> As it is a path on

which Truth is sought, we must first come to some agreement respecting the object of search.

The question, What is Truth? has been variously answered, but, instead of pausing here to consider the answers, I

<sup>1</sup> Nieto Serrano: *Bosquejo de la Ciencia Viviente*, Madrid, 1867. *Parte primera*, p. 31.

<sup>2</sup> “La cuestión de método domina y comprende hasta cierto punto todas las cuestiones filosóficas. Efectivamente el método filosófico es la filosofía

misma en acción, la cual aparece ya tal cual es desde los primeros pasos, y no puede desmentirse en lo sucesivo.”

and speech, if they choose to exercise the gift. Stars are just on the same footing, and their movements are explained by the same ready system of universal anthropomorphism. Stars, fishes, gods, heroes, men, trees, clouds, and animals, all play their equal part in the confused dramas of savage thought and savage mythology. Even in practical life the change of a sorcerer into an animal is accepted as a familiar phenomenon; and the power of soaring among the stars is one on which the Australian Biraark, or the Eskimo Shaman, most plumes himself. It is not wonderful that things which are held possible in daily practice should be frequent features of mythology. Hence the ready invention and belief of star-legends, which in their turn fix the names of the heavenly bodies. Nothing more, except the extreme tenacity of tradition and the inconvenience of changing a widely accepted name, is needed to account for the human and animal names of the stars. The Greeks received from the dateless past of savage intellect the myths, and the names of the constellations; and we have taken them, without inquiry, from the Greeks. Thus it happens that our celestial globes are just as queer menageries as any globes could be that were illustrated by Australians or American Indians, by Bushmen or Peruvian aborigines, or Eskimo. It was savages, we may be tolerably certain, who first handed to science the names of the constellations, and provided Greece with the raw material of her astronomical myths—as Bacon prettily says, we listen to the harsh ideas of earlier peoples “blown softly through the flutes of the Grecians.”

The first moment in astronomical science arrives when the savage, looking at a star, says, like the child in the nursery poem, “How I wonder what you are!” The next moment comes when the savage has made his first rough practical observations of the movements of the heavenly body. His third step is to explain these to himself. Now, science

cannot offer any but a fanciful explanation beyond the sphere of experience, The experience of the savage is limited to the narrow world of his tribe, and of the beasts, birds, and fishes of his district. His philosophy, therefore, accounts for all phenomena on the supposition that the laws of the animate nature he observes are working everywhere. But his observations, misguided by his crude magical superstitions, have led him to believe in a state of equality and kinship between men and animals, and even inorganic things. He often worships the very beasts he slays; he addresses them as if they understood him; he believes himself to be descended from the animals, and of their kindred. These confused ideas he applies to the stars, and recognises in them men like himself, or beasts like those with which he conceives himself to be in such close human relations. There is scarcely a bird or beast but the Red Indian or the Australian will explain its peculiarities by a myth, like a page from Ovid's *Metamorphoses*. It was once a man or a woman, and has been changed to bird or beast by a god or a magician. Men, again, have originally been beasts, in his philosophy, and are descended from wolves, frogs, or serpents, or monkeys. The heavenly bodies are traced to precisely the same sort of origin; and hence, we conclude, come their strange animal names, and the wild myths about them which appear in all ancient poetry. These names, in turn, have curiously affected human beliefs. Astrology is based on the opinion that a man's character and fate are determined by the stars under which he is born. And the nature of these stars is deduced from their names, so that the bear should have been found in the horoscope of Dr. Johnson. When Giordano Bruno wrote his satire against religion, the famous *Spaccio della bestia trionfante*, he proposed to banish not only the gods, but the beasts, from heaven. He would call the stars, not the *Bear*, or the *Swan*, or the *Pleiades*, but *Truth*, *Mercy*,

will propose one which is sufficiently catholic to be accepted by all schools.

Truth is the correspondence between the order of ideas and the order of phenomena, so that the one is a reflection of the other—the movement of Thought following the movement of Things.

The correspondence can never be absolute: it must, from the very structure of the mind, be relative; but this relative accuracy suffices when it enables us to foresee with certainty the changes which will arise in the external order under given conditions. If the order in our ideas respecting falling bodies sufficiently corresponds with the order of the phenomena themselves to enable us to express the Law with precision, and foresee its results with certainty, we have in that Law a truth of the only kind attainable by us.

The reader will observe that I have used the phrases "order in ideas" and "movement of thought" instead of adopting the ordinary formula "ideas conformable with objects." If Truth is the conformity of ideas with objects, Truth is a chimera, or Idealism is irresistible. "La notion de *vérité* implique une contradiction," says Delboeuf. "Par définition, une idée n'est vraie qu'à la condition d'être **conforme**, adéquate à son objet. Mais, par essence, une idée est nécessairement différente d'un objet. Comment donc puis-je parler d'une équation entre l'idée et son objet?"<sup>1</sup> The old sceptical arguments are unanswerable on this ground. We need not, however, rush into Idealism by affirming the identity of ideas and their objects; we need simply give up all pretension to absolute knowledge, and rest contented with rela-

tive knowledge, which permits of our adjusting our actions to the external order. Indeed, the ultimate aim of knowledge is adaptation; and we call it Truth when the adaptation is precise. What bodies are in themselves, what falling is in itself, need not properly concern us; only what are the relations in which bodies and their movements stand to our perceptions. If in attempting to comprehend these relations we succeed in so arranging our ideas that their order corresponds with the order of phenomena (as when we think of falling bodies having a velocity proportional to the time), that arrangement is Truth; but if, instead of the movement of Thought being controlled by the movement of Things, our ideas are arranged in an order which does not correspond with the order of phenomena (as when we think of the velocity being proportional to the space fallen through), that is Error. And this discloses the imperfection of the many definitions of Truth which regard it as "conformity among ideas." The conception of velocity proportional to *space* is a conception which would have nothing against it were it not opposed to the facts. As a pure deduction it is inevitable; a movement of Thought determined by some pre-existing thought necessarily takes that course; but a movement of Thought determined by that of Things, following step by step the succession of phenomena, leads to the conclusion of velocity proportional to the *time*.

§ 13. To attain this correspondence between the internal and external order is the object of Search; and the Methods of Search are two:—

- a. The Objective Method which moulds its conceptions on realities by closely following the movements of the objects as they severally present themselves

<sup>1</sup> Delboeuf: *Essai de Logique Scientifique*, p. 35.

Justice, and so forth, that men might be born, not under bestial, but moral, influences. But the beasts have had too long possession of the stars to be easily dislodged, and the tenure of the *Bear* and the *Swan* will probably last as long as there is a science of astronomy. Their names are not likely again to delude a philosopher into the opinion of Aristotle, that the stars are animated.

This argument had been worked out to the writer's satisfaction when he chanced to light on Mr. Max Müller's explanation of the name of the *Great Bear*. We have explained that name as only one out of countless similar appellations which men of every race give to the stars. These names, again, we have accounted for as the result of savage philosophy, which takes no great distinction between man and the things in the world, and looks on stars, beasts, birds, fishes, flowers, and trees as men and women in disguise. Mr. Müller's theory is based on philological considerations. He thinks that the name of the *Great Bear* is the result of a mistake as to the meaning of words. There was in Sanskrit, he says,<sup>1</sup> a root *ark*, or *arch*, meaning "to be bright." Some stars are called *riksha*—that is, bright ones—in the Veda.

The constellations here called the *Rikshas*, in the sense of the "bright ones," would be homonymous in Sanskrit with the *Bears*. Remember also that, apparently without rhyme or reason, the same constellation is called by Greeks and Romans the *Bear*.....There is not the shadow of a likeness with a bear. You will now perceive the influence of words on thought, or the spontaneous growth of mythology. The name *Riksha* was applied to the bear in the sense of the bright fuscous animal, and in that sense it became most popular in the later Sanskrit, and in Greek and Latin. The same name, "in the sense of the bright ones," had been applied by the Vedic poets to the stars in general, and more particularly to that constellation which in the northern parts of India was the

most prominent. The etymological meaning, "the bright stars," was forgotten; the popular meaning of *Riksha* (bear) was known to everyone. And thus it happened that, when the Greeks had left their central home and settled in Europe, they retained the name of *Arktos* for the same unchanging stars; but, not knowing why those stars had originally received that name, they ceased to speak of them as *arktot*, or many bears, and spoke of them as the *Bear*.

This is a very good example of the philological way of explaining a myth. If once we admit that *ark*, or *arch*, in the sense of "bright" and of "bear," existed, not only in Sanskrit, but in the undivided Aryan tongue, and that the name *Riksha*, bear, "became in that sense most popular in Greek and Latin," this theory seems more than plausible. But the explanation does not look so well if we examine, not only the Aryan, but all the known myths and names of the *Bear* and the other stars. Professor Sayce, a distinguished philologist, says we may not compare non-Aryan with Aryan myths. We have ventured to do so, however, in this paper, and have shown that the most widely severed races give the stars animal names, of which the *Bear* is one example. Now, if the philologists wish to persuade us that it was decaying and half-forgotten language which caused men to give the names of animals to the stars, they must prove their case on an immense collection of instances—on Iowa, Kaneka, Murri, Maori, Brazilian, Peruvian, Mexican, Egyptian, Eskimo, instances. It would be the most amazing coincidence in the world if forgetfulness of the meaning of their own speech compelled tribes of every tongue and race to recognise men and beasts, cranes, cockatoos, serpents, monkeys, bears, and so forth, in the heavens. How came the misunderstood words always to be misunderstood in the same way? Does the philological explanation account for the enormous majority of the phenomena? If it fails, we may at least doubt whether it solves the one isolated case of the

to Sense, so that the movements of Thought may synchronise with the movements of Things.

*β.* The Subjective Method which moulds realities on its conceptions, endeavouring to discern the order of Things, not by step by step adjustments of the order of ideas to it, but by the anticipatory rush of Thought, the direction of which is *determined* by Thoughts and not *controlled* by Objects.

Observation of objects presented to the mind must be succeeded by Conjecture respecting the connecting, but unobserved, links. The successive stages of inquiry are from Observation to Conjecture, and from Conjecture to Verification. The Subjective Method stops at the second stage: its function is Hypothesis. The Objective Method passes on to the third stage: its function is Verification. Thus, while the first characterises our spontaneous tendency, and is seen in full vigour in all the early forms of speculation, the second characterises our reflective tendency, and is the source of positive knowledge. The Objective Method thus absorbs what is excellent in the Subjective Method, as Science takes up into itself whatever Metaphysics can establish, rejecting what is irrelevant and completing what is incomplete. Both physicist and metaphysicist employ Observation and Conjecture; but the physicist, if true to the Objective Method, is careful to verify the accuracy of his observations and conjectures, submitting the order of his ideas to the order of phenomena; whereas the metaphysicist, obeying the subjective impulse, is careless of Verification, and is quite ready to rely on data and conclusions which are absolutely incapable of Verification. The one freely employs Hypothesis under the rigorous condition of

never relying on a conjecture as a fact, never assuming that a harmony in his conceptions must necessarily imply a corresponding arrangement in phenomena; the other employs Hypothesis under the single condition of not thereby introducing a logical discord. In the one case the "anticipatory rush of thought" is controlled by the confrontation of ideas with objects. In the other case the rush of thought is controlled only by the confrontation of ideas with ideas. Briefly, then, it may be said that the Objective Method seeks Truth in the relations of objects; whereas the Subjective Method seeks it in the relations of ideas.

§ 14. Philosophers expound the objective and subjective elements of which Knowledge is composed, as the *material* and *formal* elements. Things furnish the materials. Thought furnishes the forms. Objects stimulate the activity of the Mind; the Laws of mental action determine the result, in the forms of percepts, concepts, and judgments. But philosophers continually overlook the important consideration that the Mind, besides its laws which determine the forms of the material given by objects, has also a movement of its own; and this movement is determined from within, by some pre-existing movement, just as it may be determined from without, by the stimulus of objects. It is this *subjective current* which, disturbing the clear reflection of the objective order, is the main source of error. It determines those concepts and judgments which have no corresponding objects: hallucinations, reveries, dreams, hypotheses, figments. This being so, we cannot accept the notion adopted by Sir W. Hamilton from Twesten, that "the condition of error is not the activity of

*Great Bear* among the Greeks and Romans. It must be observed that the philological explanation of Mr. Müller does not clear up the Arcadian story of their own descent from a she-bear who is now a star. Yet similar stories of the descent of tribes from animals are so widespread that it would be difficult to name the race or the quarter of the globe where they are not found. Are they all derived from misunderstood words meaning "bright"? These considerations appear to be a strong argument for comparing not only Aryan, but all attainable, myths. We shall often find, if we take a wide view, that the philological explanation, which seemed plausible in a single case, is hopelessly narrow when applied to a large collection of

parallel cases in languages of various families.

Finally, in dealing with star-myths, we adhere to the hypothesis of Mr. Tylor. "From savagery up to civilisation," Akkadian, Greek, or English,

there may be traced in the mythology of the stars a course of thought, changed indeed, in application, yet never broken in its evident connection from first to last. The savage sees individual stars as animate beings, or combines star-groups into living celestial creatures, or limbs of them, or objects connected with them; while at the other extremity of the scale of civilisation the modern astronomer keeps up just such ancient fancies, turning them to account in useful survival, as a means of mapping out the celestial globe.<sup>1</sup>

<sup>1</sup> Ideler (*Untersuchungen ueber den Ursprung der Sternnamen*) may also be consulted.

## VI.

### "KALEVALA"; OR, THE FINNISH NATIONAL EPIC<sup>1</sup>

It is difficult to account for the fact that the scientific curiosity which is just now so busy in examining all the monuments of the primitive condition of our race should, in England at least, have almost totally neglected to popularise the *Kalevala*, or national poem of the Finns. Besides its fresh and simple beauty of style, its worth as a storehouse of every kind of primitive folklore, being as it is the production of an *Urvolk*, a nation that has undergone no violent revolution in language or institutions, the *Kalevala* has the peculiar interest

of occupying a position between the two kinds of primitive poetry, the ballad and the epic. So much difficulty has been introduced into the study of the first developments of song, by confusing these distinct sorts of composition under the name of popular poetry, that it may be well, in writing of a poem which occupies a middle place between epic and ballad, to define what we mean by each.

The author of our old English *Art of Poesie* begins his work with a statement which may serve as a text. "Poesie," says Puttenham, writing in 1589, "is more ancient than the *artificiall* of the Greeks and Latines, coming by instinct of nature, and used by the savage and

<sup>1</sup> See Comparetti's excellent work, *The Kalevala*. (Longmans.)

intelligence, but its inactivity." On the contrary, we must assign error to the activity of intelligence when it follows its own impulses in lieu of receiving the direction from objects. "What is actually thought," according to Twesten and his follower, "cannot but be correctly thought. Error first commences when thinking is remitted, and can in fact only gain admission in virtue of the truth which it contains;—every error is a perverted truth."<sup>1</sup> This seems to me so glaringly in opposition to all rational interpretation that I must conclude it to mean something very different from what it says. Hamilton's comment only makes the matter worse.

§ 15. That the source of Error is the subjective current determining the direction of the thoughts, is easily shown. Error arises in the substitution of Inference for Presentation. No error can possibly arise in Sensation itself, but solely in the movements of thought which are prompted by the sensation. The immense activity of this subjective current, the large interfusion of Inference in the simplest acts of Perception, has long been recognised; and, as I have said elsewhere, what is called a "fact," and held to be indisputable because it is a "fact," is in reality a bundle of inferences, some or all of which may be false, tied together by sensations, which must be true. Take a case so simple as the sight of an apple on the table. All that is here directly certified by consciousness is the sensation of a coloured surface; with this are linked certain ideas of roundness, firmness, sweetness, and fragrance, which were once sensations, and are now recalled by this of colour; and the whole group of actual and inferred sensations

clusters into the fact which is expressed in "there is an apple." Yet any one of these inferences may be erroneous. The coloured object may be the imitation of an apple in wood or stone; the inferences of roundness and solidity would then be correct, those of sweetness and fragrance erroneous; the statement of fact would be false. Or the object seen may be another kind of fruit, resembling an apple, yet in important particulars differing from it. Or the object may not exist, and our perception may be an hallucination. Thus a case seemingly so simple may furnish us with the evidence that Facts express our conception of the order in external things, and not the unadulterated order itself. Should the accuracy of any particular fact happen to be of importance—and in Science all facts are important—we must verify it, before accepting it. How is it verified? By submitting each of its constituent inferences to the primordial test of Consciousness. The test with regard to objects within range of sense is obviously the reduction of Inference to Sensation. The test with regard to axioms, or general principles transcending sense, is conformity with the laws of thought; when we have thus verified a fact we have attained the highest degree of certitude.

The mental vision by which in Perception we see the *unapparent* details—i.e., by which sensations formerly co-existing with the one now affecting us are reinstated under the form of ideas, which represent the objects—is a process closely allied to Ratiocination, which also presents an *ideal series* such as, if the objects were before us, would be a series of sensations, or perceptions. A chain of reasoning is a chain of inferences, which are *ideal presentations* of the details now *unapparent to sense*. Could we realise

<sup>1</sup> Hamilton: *Logic*, i. 77.

uncivil, who were before all science and civilitie. This is proved by certificate of merchants and travellers, who by late navigations have surveyed the whole world, and discovered large countries, and strange people, wild and savage, affirming that the American, the Perusine, and the very canniball, do sing, and also say, their highest and holiest matters in certain riming versicles." Puttenham is here referring to that instinct of primitive men which compels them in all moments of high-wrought feeling, and on all solemn occasions, to give utterance to a kind of chant.<sup>1</sup> Such a chant is the song of Lamech, when he had "slain a man to his wounding." So in the Norse sagas Grettir and Gunnar sing when they have anything particular to say; and so in the *Märchen*—the primitive fairy tales of all nations—scraps of verse are introduced where emphasis is wanted. This craving for passionate expression takes a more formal shape in the lays which among all primitive peoples, as among the modern Greeks to-day,<sup>2</sup> are sung at betrothals, funerals, and departures for distant lands. These songs have been collected in Scotland by Scott and Motherwell; their Danish counterparts have been translated by Mr. Prior. In Greece, M. Fauriel and Dr. Ulrichs; in Provence, Damase Arbaud; in Italy, M. Nigra; in Servia, Talvij; in France, Gérard de Nerval, have done for their separate countries what Scott did for the Border. Professor Child, of Harvard, has published a beautiful critical collection of English *Volkslieder*, with all known variants from every country.

A comparison of the collections proves that among all European lands the primitive "versicles" of the people are akin in tone, form, and incident. It is this kind of early expression of a people's life—careless, abrupt, brief, as was necessitated by the fact that they were sung to the accompaniment of the dance—that we call ballads. These are distinctly,

and in every sense, popular poems; and nothing can cause greater confusion than to apply the same title, "popular," to early epic poetry. Ballads are short; a long ballad, as Mr. Matthew Arnold has said, creeps and halts. A true epic, on the other hand, is long, and its tone is grand, noble, and sustained. Ballads are not artistic; while the form of the epic, whether we take the hexameter or the rougher *laisse* of the French *chansons de geste*, is full of conscious and admirable art. Lastly, popular ballads deal with vague characters, acting and living in vague places; while the characters of an epic are heroes of definite station, whose descendants are still in the land, whose home is a recognisable place—Ithaca, or Argos. Now, though these two kinds of early poetry—the ballad, the song of the people; the epic, the song of the chiefs of the people, of the ruling race—are distinct in kind, it does not follow that they have no connection, that the nobler may not have been developed out of the materials of the lower form of expression. And the value of the *Kalevala* is partly this—that it combines the continuity and unison of the epic with the simplicity and popularity of the ballad, and so forms a kind of link in the history of the development of poetry. This may become clearer as we proceed to explain the literary history of the Finnish national poem.

Sixty years ago, it may be said, no one was aware that Finland possessed a national poem at all. Her people—who claim affinity with the Magyars of Hungary, but are possibly a back-wave of an earlier tide of population—had remained untouched by foreign influences since their conquest by Sweden, and their somewhat lax and wholesale conversion to Christianity: events which took place gradually between the middle of the twelfth and the end of the thirteenth centuries. Under the rule of Sweden, the Finns were left to their quiet life and undisturbed imaginings, among the forests and lakes of the region which

<sup>1</sup> Talvij, *Charakteristik der Volkslieder*, p. 3.

<sup>2</sup> Fauriel, *Chants de la Grèce moderne*.

all the links in this chain, by placing the objects in their actual order as a visible series, the chain of reasoning would be a succession of perceptions, and would cease to be called reasoning. The path of the planets is seen by reason to be an ellipse; it would be perceived as a fact if we were in a proper position, and endowed with the requisite instruments to enable us to follow the planet in its course. Not having this advantage, we infer the unapparent points in its course, from those which are apparent. We see them mentally. In like manner, suppose a human body is discovered under conditions which suggest that it has been burned, but without sufficient indication of the cause—*i.e.*, the facts antecedent to the burning. Some one suggests that these unapparent facts are those of Spontaneous Combustion. Our greater familiarity with the facts of combustion in general, and with the facts of the animal organism, enables us to *see* that this explanation is absurd; we mentally range the supposed objects before us, and see that *such* an order of co-existences and successions is in contradiction to all experience; we cannot see what the actual order was, but see clearly that it *was not that*.

Correct reasoning is the ideal assemblage of objects in their true relations of co-existence and succession. It is seeing with the mind's eye. Bad reasoning results from overlooking either some of the objects, or their relations; some links are dropped, and the gap is filled up from another series. Thus the traveller *sees* a highwayman, where there is truly no more than a sign-post in the twilight; and a philosopher, in the twilight of knowledge, *sees* a pestilence foreshadowed by an eclipse.

These considerations may elucidate

the real meaning to be assigned to Facts, which are sometimes taken to express the order of external things, and sometimes our conception of that order—our *description* of it; just as sound means both the vibrations of the air and our sensation of them. There is a general tendency to use the word Fact for a final truth. "This is a fact, not a theory," means, "This is an indisputable truth, not a disputable *view* of the truth." But if, as we have seen, Facts are inextricably mingled with Inferences, and if both Perception and Reasoning are processes of *mental vision reinstating unapparent details*, and liable to error in the inferences, it is clear that the radical antithesis is not between Fact and Theory, but between *verified and unverified Inferences*.

The antithesis between Fact and Theory is untenable, for the same statement may be either a fact or a theory, without any change in its evidence. It is a fact that the earth is globular. It is a fact that this globe is an oblate spheroid. It is a fact that its orbit is elliptical. No one doubts that these are facts, no one doubts that they are theories. Shall we say that they were theories until they were verified, when they became facts? This will not extricate us; since all facts require verification before they are admitted as truths; up to that point they are not less inferential than theories.

I see an apple now falling, and I see an apple which has fallen. These are two facts which ordinary language will not suffer us to call theories. Now consider two theories which ordinary language suffers us to call facts—namely, that all apples when unsupported will fall, and that the spaces fallen through will be as the squares of the times. These

they aptly called Pohja, "the end of things"; while their educated classes took no very keen interest in the native poetry and mythology of their race. At length the annexation of Finland by Russia, in 1809, awakened national feeling, and stimulated research into songs and customs which were the heirlooms of the people.

It was the policy of Russia to encourage, rather than to check, this return on a distant past; and from the north of Norway to the slopes of the Altai ardent explorers sought out the fragments of unwritten early poetry. These runes, or *Runots*, were chiefly sung by old men called *Runoias*, to beguile the weariness of the long dark winters. The custom was for two champions to engage in a contest of memory, clasping each other's hands, and reciting in turn till he whose memory first gave in slackened his hold. The *Kalevala* contains an instance of this practice, where it is said that no one was so hardy as to clasp hands with Wainämöinen, who is at once the Orpheus and the Prometheus of Finnish mythology. These *Runoias*, or rhapsodists, complain, of course, of the degeneracy of human memory; they notice how any foreign influence, in religion or politics, is destructive to the native songs of a race.<sup>1</sup> "As for the lays of old time, a thousand have been scattered to the wind, a thousand buried in the snow; .....as for those which the Monks (the Teutonic knights) swept away and the prayer of the priests overwhelmed, a thousand tongues were not able to recount them." In spite of the losses thus caused, and in spite of the suspicious character of the Finns, which often made the task of collection a dangerous one, enough materials remained to furnish Dr. Lönnrot, the most noted explorer, with thirty-five *Runots*, or cantos. These were published

in 1835, but later research produced the fifteen cantos which make up the symmetrical fifty of the *Kalevala*. In the task of arranging and uniting these Dr. Lönnrot played the part traditionally ascribed to the commission of Pisistratus in relation to the *Iliad* and *Odyssey*. Dr. Lönnrot cut about and altered at pleasure the materials which come before us as one poem. They have little unity now, and originally had none.

It cannot be doubted that, at whatever period the Homeric poems took shape in Greece, they were believed to record the feats of the supposed ancestors of existing families. Thus, for example, Pisistratus, as a descendant of the Nelicidæ, had an interest in securing certain parts, at least, of the *Iliad* and *Odyssey* from oblivion. The same family pride embellished and preserved the epic poetry of early France. There were in France but three heroic houses, or *gestes*, and three corresponding cycles of *épopées*. Now, in the *Kalevala* there is no trace of the influence of family feeling; it was no one's peculiar care and pride to watch over the records of the fame of this or that hero. The poem begins with a cosmogony as wild as any Indian dream of creation; and the human characters who move in the story are shadowy inhabitants of no very definite lands, whom no family claim as their forefathers. The very want of this idea of family and aristocratic pride gives the *Kalevala* a unique place among epics. It is emphatically an epic of the people, of that class whose life contains no element of progress, no break in continuity; which from age to age preserves, in solitude and close communion with nature, the earliest beliefs of grey antiquity. The Greek epic, on the other hand, has, as Preller<sup>1</sup> points out, "nothing to do with natural man,"

<sup>1</sup> Thus Scotland scarcely produced any good ballads, properly speaking, after the Reformation. The Kirk suppressed the dances to whose motion the ballad was sung in Scotland, as in Greece, Provence, and France.

<sup>1</sup> L. Preller's *Augewählte Aufsätze*, Greek ideas on the origin of man. It is curious that the myth of a gold, a silver, and a copper race occurs in South America. See Brasseur de Bourbourg's *Notes on the Popol Vuh*.

are two theories of extreme generality, which are far more indisputable than the facts we have contrasted them with. They carry such certainty that no mind having the requisite preparation can for a moment hesitate in assenting to them. They are inferences which are necessities. Whereas the inferences involved in the facts before named may very easily be erroneous. The falling object may not be an apple; the apple found at the foot of the tree may not have fallen, but have been plucked and placed there. Thus doubt is permissible; and if the facts carried any importance we should be bound to verify the accuracy of our inferences. No doubt is permissible in respect to the two theories, because the inferences on which they rest have already been vigorously verified. They carry none of those possibilities of error which we know may be carried by individual *experiences*; all such possibilities have been eliminated in the establishment of the general truth. Should any individual experience seem in contradiction with a thoroughly verified theory, should a hundred individual experiences contradict it, our confidence would suffer no disturbance; we should at once assign them to the interference of some *condition not included in the formula*. That condition might be wholly undiscoverable, but we should be certain that the laws of nature were invariable; and our experience of disturbing influences is sufficiently extensive to invoke them in every apparent exception to a law. If it happened that two magnets placed side by side impressed on a particle of iron a velocity greater, or less, than the sum of the velocity due to each magnate acting separately, and if this were to occur a thousand times, we should not doubt the truth of the law that the velocity is

proportional to the force, but should attribute this exception to some exceptional condition, such as the influence of one magnet on the other. The reason is simple: the law has been rigorously verified; the absence of any exceptional condition has not been verified, whereas the presence of such a condition is suggested by manifold experiences in analogous cases.

Failing thus to discover any valid antithesis between Fact and Theory, we must look upon the ordinary distinction as simply verbal. Shall we express it by the terms Description and Explanation, implying that a Fact describes the order of phenomena, and a Theory interprets that order? For many purposes this would suffice. Yet on examination we shall find that an Explanation is only a fuller Description: more details are introduced, greater precision is given, the links in the chain which are unapparent to sense are made apparent to reason; but the essential mystery is untouched; successions are enumerated, but causation escapes. Thus in the description of falling bodies, greater fulness and precision of detail are given when the unapparent links are added, and the law of gravitation is introduced as the explanation. In like manner the description of an event, say the destruction of a house by a fire, acquires greater fulness and precision of detail when the apparent details are completed by some eye-witness who saw the fire break out, and explains it by this enumeration of details. In each case the objects are ranged in their order, and are *seen* thus; but in each case many objects are not seen, many intermediate links are overlooked, or are undiscoverable; and the causal nexus is for ever undiscoverable. Thus it is that explanations are descriptions

but with an ideal world of heroes, with sons of the gods, with consecrated kings, heroes, elders, *a kind of specific race of men*. The people exist only as subsidiary "to the great houses, as a mere background against which stand out the shining figures of heroes; as a race of beings fresh and rough from the hands of nature, with whom, and with whose concerns, the great houses and their bards have little concern." This feeling—so universal in Greece, and in the feudal countries of mediaeval Europe—that there are two kinds of men, the golden and the brazen race, as Plato would have called them, is absent, with all its results, in the *Kalevala*.

Among the Finns we find no trace of an aristocracy; there is scarcely a mention of kings or priests; the heroes of the poem are really popular heroes—fishers, smiths, husbandmen, "medicine-men," or wizards; exaggerated shadows of the people, pursuing, on a heroic scale, not war, but the common daily business of primitive and peaceful men. In recording their adventures the *Kalevala*, like the shield of Achilles, reflects all the life of a race—the feasts, the funerals, the rites of seed-time and harvest, of marriage and death, the hymn, and the magical incantation.

Though without the interest of an unique position as a popular epic, the *Kalevala* is very valuable, both for its literary beauties and for the confused mass of folklore which it contains.

Here old cosmogonies, attempts of man to represent to himself the beginnings of things, are mingled with the same wild imaginings as are found everywhere in the shape of fairy tales. We are hurried from an account of the mystic egg of creation, to a hymn like that of the Ambarval Brothers, to a strangely familiar scrap of a nursery story, to an incident which we remember as occurring in almost identical words in a Scotch ballad. We are among a people which endows everything with human characters and life, which is in familiar relations with birds, and beasts,

and even with rocks and plants. Ravens and wolves and fishes of the sea, sun, moon, and stars, are kindly or churlish; drops of blood find speech; man and maid change to snake or swan, and resume their forms; ships have magic powers, like the ships of the Phaeacians.

Then there is the oddest confusion of every stage of religious development. We find a supreme God, delighting in righteousness; Ukko, the lord of the vault of air, who stands apart from men, and sends his son, Wainamöinen, to be their teacher in music and agriculture.

Across this faith comes a religion of petrified abstractions, like those of the Roman Pantheon. There are gods of colour, a goddess of weaving, a goddess of man's blood, besides elemental spirits of woods and waters, and the *manes* of the dead. Meanwhile the working faith of the people is the belief in magic—generally a sign of the lower culture. It is supposed that the knowledge of certain magic words gives power over the elemental bodies which obey them; it is held that the will of a distant sorcerer can cross the lakes and plains like the breath of a fantastic frost, with power to change an enemy to ice or stone. Traces remain of the worship of animals: there is a hymn to the bear; a dance like the bear-dance of the American Indians; and another hymn tells of the birth and power of the serpent. Across all, and closing all, comes a hostile account of the origin of Christianity—the end of joy and music.

How primitive was the condition of the authors of this medley of beliefs is best proved by the survival of the custom called exogamy.<sup>1</sup> This custom, which is not peculiar to the Finns, but is probably a universal note of early society, prohibits marriage between members of the same kin. Consequently, the main action, such as it is, of the *Kalevala* turns on the efforts made by the men of

<sup>1</sup> See essay on *Early History of the Family*.

and descriptions are explanations, facts are theories, and theories facts. Science is the explanation of nature; the systematic co-ordination of the facts of co-existence and succession.

§ 16. In the preceding paragraphs we have vindicated the necessity of the subjective current, and its dangers. The weakness of the Subjective Method is its impossibility of applying Verification; whereas the security of the Objective Method lies in its vigilant Verification. In both the mind has to supply the *formal* elements; in both it has to link together sensations by inferences, and to classify objects according to inferred relations. But the Objective Method simply co-ordinates the materials furnished by Experience; it introduces no new materials; or if it admits them, it does so provisionally and hypothetically; they are not accepted as real objects until their reality has been otherwise established. Whereas the Subjective Method is perpetually overstepping the limits that divide the material from the formal; its tendency is to confound concepts with percepts, ideas with objects, conjectures with realities. It commits the fault of drawing *material* from the Subject, instead of drawing only *form*. It takes up an inference and treats it as a fact, and thus gives its own fictions the character of reality. Because it cannot apply Verification it assumes that the order of ideas must correspond with the external order if no disorder (contradiction) be displayed. Hence it is that metaphysical conclusions are sometimes so audaciously at variance with what is known of the external order.<sup>1</sup>

<sup>1</sup> Hegel, for instance, bases his system on contradiction. So far from admitting that a thing cannot be the contrary of that which it is, affirms, as a fundamental principle, that

§ 17. The Objective Method is incapable of reaching any results without the large employment of Inference, the successive steps of discovery being Observation, Hypothesis, and Verification. It is distinguished from the Subjective Method, not by its *aim*, which is in both that of co-ordinating the relations of objects, but by its principle of seeking the relations in the order of the objects themselves, instead of in the order of our ideas: submitting therefore every Inference to the control of Verification, and refusing to accept a conjecture as a fact until it has been tested by confrontation with the external order. The cardinal distinction between Metaphysics and Science lies in Method, not in the nature of their topics; and the proof of this is exemplified in the fact that a theory may be transferred from Metaphysics to Science simply by the addition of a verifiable element; or, conversely, may be transferred from Science to Metaphysics by the withdrawal of this same verifiable element. Thus the law of gravitation is a scientific theory; but if we withdraw from it the verifiable formula "inversely as the square of the distance and directly as the mass," there remains only the occult Attraction—which is metaphysical. On the other hand, if to a metaphysical theory of gravitation, which explains the phenomena by Attraction or an "inherent virtue," we add the verifiable formula of its mode of action, the purely subjective conception passes at once into the objective region, and a scientific theory results.

§ 18. In the course of the history of Philosophy we incessantly witness the

"everything is at once that which it is and the contrary of that which it is."

Kaleva to obtain brides from the hostile tribe of Pohja.<sup>1</sup>

Further proof of ancient origin is to be found in what is the great literary beauty of the poem—its pure spontaneity and simplicity. It is the production of an intensely imaginative race, to which song came as the most natural expression of joy and sorrow, terror or triumph—a class which lay near to nature's secret, and was not out of sympathy with the wild kin of woods and waters.

These songs [says the prelude] were found by the wayside, and gathered in the depths of the coves; blown from the branches of the forest, and culled among the plumes of the pine-trees. These lays came to me as I followed the flocks, in a land of meadows honey-sweet and of golden hills.....The cold has spoken to me, and the rain has told me her runes; the winds of heaven, the waves of the sea, have spoken and sung to me; the wild birds have taught me, the music of many waters has been my master.

The metre in which the epic is chanted resembles, to an English ear, that of Mr. Longfellow's *Hawatha*—there is assonance rather than rhyme; and a very musical effect is produced by the liquid character of the language, and by the frequent alliterations.

This rough outline of the main characteristics of the *Kalevala* we shall now try to fill up with an abstract of its contents. The poem is longer than the *Iliad*, and much of interest must necessarily be omitted; but it is only through such an abstract that any idea can be given of the sort of unity which does prevail amid the most utter discrepancy.

In the first place, what is to be understood by the word *Kalevala*? The affix *la* signifies "abode." Thus, "Tuo-nela" is "the abode of Tuoni," the god

of the lower world; and as "kaleva" means "heroic," "magnificent," "Kalevala" is "The Home of Heroes." The poem is a record of the adventures of the people of Kalevala—of their strife with the men of Pohjola, the place of the world's end. We may fancy two old Runoias, or singers, clasping hands on one of the first nights of the Finnish winter, and beginning (what probably has never been accomplished) the attempt to work through the *Kalevala* before the return of summer. They commence *ab ovo*, or, rather, before the egg. First is chanted the birth of Wainämöinen, the benefactor and teacher of men. He is the son of Luonnotar, the daughter of Nature, who answers to the first woman of the Iroquois cosmogony. Beneath the breath and touch of wind and tide she conceived a child; but nine ages of man passed before his birth, while the mother floated on "the formless and the multiform waters." Then Ukko, the supreme God, sent an eagle, which laid her eggs in the maiden's bosom, and from these eggs grew earth and sky, sun and moon, star and cloud. Then was Wainämöinen born on the waters, and reached a barren land, and gazed on the new heavens and the new earth. There he sowed the grain that is the bread of man, chanting the hymn used at seed-time, calling on the mother earth to make the green herb spring, and on Ukko to send down clouds and rain. So the corn sprang, and the golden cuckoo—which in Finland plays the part of the popinjay in Scotch ballads, or of the three golden birds in Greek folksongs—came with his congratulations.

In regard to the epithet "golden," it may be observed that gold and silver, in the Finnish epic, are lavished on the commonest objects of daily life.

This is a universal note of primitive poetry, and is not a peculiar Finnish idiom, as M. Leouzon le Duc supposes; nor, as Mr. Tozer seems to think, in his account of Romaic ballads, a trace of Oriental influence among the modern Greeks. It is common to all the ballads

<sup>1</sup> This constant struggle may be, and of course by one school of comparative mythologists will be, represented as the strife between light and darkness, the sun's rays and the clouds of night, and so on. M. Castren has well pointed out that the struggle has really an historical meaning. Even if the myth be an elementary one, its constructors must have been in the exogamous stage of society.

disastrous effects of transporting the *formal* elements of knowledge into the region of *material* elements—"realising abstractions," as it is called—and deducing conclusions from unverified inferences as if they had been verified. We witness the efforts of philosophers to interpret the external order by the internal order, animating Nature with human tendencies, interpreting *motors* by *motives*. Thus, because we derive our conceptions of Force and Cause from our own efforts and volitions, we interpret the changes seen without us by the changes felt within us. This is the source of the Fetichism of children and savages; of the Polytheism of early nations; and, by a gradual refinement in abstraction, of the Metaphysics and Physics of philosophers. Causes are first personified; next raised into Deities; then, by gradual elimination of the personal qualities, transformed into Entities; and finally resolved into Forces, which are exponents of relations. Thus first disappears the Will, next the independent existence; and what finally remains is an *abstract expression of the observed order*.

§ 19. To make the two Methods more readily appreciable by exhibiting them in operation, I will select an imaginary case and two real cases.

From a country where clocks are unknown, even by tradition, two travellers arrive, and in the kitchen of the cottage where they are first received they observe with astonishment an eight-day clock. The phenomena it presents are so novel that our travellers at once begin attempting an explanation. Now, all explanation consists in bringing the unknown facts under certain general facts already known; only by finding what the unknown is *like*, can it be classed and

known. In the present case the new phenomena resemble certain phenomena observed in animals. Hence the first rough approximation to an explanation is the conjecture that the clock must be alive. Suppose one of the travellers to be uncultivated, and still in the fetichistic stage, he will at once *conclude from his conjecture* that the clock is a fetich, and is inhabited by a good or evil Spirit. Let us, however, suppose him to have emerged from the primitive stage of intellectual development, and to have become a thoughtful metaphysician. His companion we will suppose to have been trained in Science and its methods. Both start from the spontaneous hypothesis that the clock is alive, this being the conjecture which most naturally ranges the new phenomena under known phenomena. Let us now watch their procedure.

A is a subjective philosopher, and, not aware of the absolute necessity of verifying his hypothesis, proceeds to apply it, and to deduce explanations of the clock-phenomena from the known facts of animal life. The ticking resembles the regular sounds of breathing; the beating of the pendulum is like the beating of the heart; the slow movements of the hands are they not movements of feelers in search of food? the striking of the hours are they not cries of pain or expressions of anger? If the hours are struck just as he approaches the clock to examine it, or has laid hold of it, the coincidence easily suggests rage or terror as the cause; and he having once formed that conception, all subsequent experience of the clock striking when he is at a distance from it, or when no one is in the kitchen, will fail to shake it, but will be accommodated to it by other explanations.

of Europe, as M. Ampère has pointed out, and may be observed in the *Chanson de Roland*, and in Homer.

While the corn ripened, Wäinämöinen rested from his labours, and took the task of Orpheus. He sang, says the *Kalevala*, of the origin of things, of the mysteries hidden from babes, that none may attain to in this sad life, in the hours of these perishable days. The fame of the Runoia's singing excited jealousy in the breast of one of the men around him, of whose origin the *Kalevala* gives no account. This man, Joukahainen, provoked him to a trial of song, boasting, like Empedocles, or like one of the old Celtic bards, that he had been all things. "When the earth was made, I was there; when space was unrolled, I launched the sun on his way." Then was Wainämöinen wroth, and by the force of his enchantment he rooted Joukahainen to the ground, and suffered him not to go free without promising him the hand of his sister Aino. The mother was delighted; but the girl wept that she must now cover her long locks, her curls, her glory, and be the wife of "the old, imperturbable Wäinämöinen." It is in vain that her mother offers her dainty food and rich dresses; she flees from home, and wanders till she meets three maidens bathing, and joins them, and is drowned, singing a sad song: "Ah, never may my sister come to bathe in the sea-water, for the drops of the sea are the drops of my blood." This wild idea occurs in the Romaic ballad, *η κόρη ταξιδεύτρια*, where a drop of blood on the lips of the drowned girl tinges all the waters of the world. To return to the fate of Aino. A swift hare runs (as in the Zulu legend of the Origin of Death) with the tale of sorrow to the maiden's mother, and from the mother's tears flow rivers of water, and therein are isles with golden hills where golden birds make melody. As for the old, the imperturbable Runoia, he loses his claim to the latter title; he is filled with sorrow, and searches through all the elements for his lost bride. At length he catches

a fish which is unknown to him, who, like Atlas, "knew the depths of all the seas." The strange fish slips from his hands; a "tress of hair, of drowned maiden's hair," floats for a moment on the foam; and too late he recognises that "there was never salmon yet that shone so fair, above the nets at sea." His lost bride has been within his reach, and now is doubly lost to him. Suddenly the waves are cloven asunder, and the mother of Nature and of Wäinämöinen appears, to comfort her son, like Thetis from the deep. She bids him go and seek, in the land of Pohjola, a bride alien to his race. After many a wild adventure, Wäinämöinen reaches Pohjola, and is kindly entreated by Loutri, the mother of the maiden of the land. But he grows homesick, and complains, almost in Dante's words, of the bitter bread of exile. Loutri will only grant him her daughter's hand on condition that he gives her a *sampo*. A sampo is a mysterious engine that grinds meal, salt, and money. In fact, it is the mill in the well-known fairy-tale, *Why the Sea is Salt*.<sup>1</sup>

Wainämöinen cannot fashion this mill himself; he must seek aid at home from Ilmarinen, the smith who forged "the iron vault of hollow heaven." As the hero returns to *Kalevala*, he meets the Lady of the Rainbow, seated on the arch of the sky, weaving the golden thread. She promises to be his, if he will accomplish certain tasks, and in the course of those he wounds himself with an axe. The wound can only be healed by one who knows the mystic words that hold the secret of the birth of iron. The legend of this evil birth--how iron grew from the milk of a maiden, and was forged by the primeval smith, Ilmarinen, to be the bane of warlike men--is communicated by Wäinämöinen to an old

<sup>1</sup> Sampo may be derived from a Thibetan word, meaning "fountain of good"; or it may possibly be connected with the Swedish *stamp*, a hand-mill. The talisman is made of all the quaint odds and ends that the Feticist treasures--swan's feathers, flocks of wool, and so on.

By continuing to observe the phenomena his first rough explanation would gradually be modified, and give place to one more consistent with the facts. A variety of ingenious explanations would occur; but they would all be vitiated by the absence of any verification of the data. He observes a certain periodicity in the recurrence of the cries. There is a regularity in the succession of these cries—one being always followed by two, and two by three, and so on up to twelve; after which one recurs and two and three in the old order. To his great delight he at last observes a coincidence between each of these cries and the position of the hands on the dial-plate; the longer hand always pointing to twelve, and the shorter hand to the number corresponding with the cries. Hence he properly infers a causal connection; but *what* that is he can only guess; out of several guesses he selects the most plausible. He propounds his explanation to his friend B with perfect confidence in its truth.

B hereupon impatiently points out the treacherous nature of the procedure A has followed. "My dear fellow, you seem unaware that your starting-point requires strict examination. You assume the vitality of the clock, and, having assumed this, you interpret by it the resemblance of ticking to breathing, and of the sounds to cries of pain and anger. But the clock may be alive, and yet these resemblances may be fallacious; they must be verified before they can be accepted; and if the clock is *not* alive? You muddle yourself with Metaphysics, and amuse yourself with drawing deductions, instead of verifying your data. In lassing the new facts under old facts it is necessary that we should assure ourselves that the resemblance we imagine

is a real resemblance, and springs from similar roots. To effect this, rigorous Analysis is indispensable. But on your Subjective Method there is no analysis of objects, only of ideas. Let me describe the course of my own investigations, guided by that Method which Science has taught me to rely on.

"Like you, I conjectured that an animal was before me. What animal? I first perceived that in many respects it was unlike all animals known to me; and, pursuing this track, I found so many points of unlikeness, and these of such significance in animal life, that *another* conjecture emerged, and I asked, Is it an animal at all? Here were two starting-points, both conjectural, both needing verification. I chose to begin upon the second, and for this reason: if the clock were not an animal, the natural inference was that it must be a machine. I was already familiar with many machines, more so than with organisms, and I began trying how far the observed phenomena could be brought under the known facts of mechanism. Now observe the operation of scientific method! You might have joined with me in forming precisely the same conjectures, but you would have started off at a tangent, and would have deduced from mechanical facts just as you deduced from vital facts, without troubling yourself about Verification. Had I not employed that potent instrument Analysis, I should never have discovered the truth about the clock. The complex facts had to be decomposed, and their elements ascertained. As this could not (successfully) be done by analysis of my ideas, I had no alternative but to take the clock to pieces, bit by bit, in the search after the objective condition of each element in this complex whole. I removed the

magician. The wizard then solemnly curses the iron, *as a living thing*, and invokes the aid of the supreme God Ukko, thus bringing together in one prayer the extremes of early religion. Then the hero is healed, and gives thanks to the Creator, "in whose hands is the end of a matter."

Returning to Kalevala, Wäinämöinen sends Ilmarinen to Pohjola to make the sampo, "a mill for corn one day, for salt the next, for money the next." The fatal treasure is concealed by Loutri, and is obviously to play the part of the fairy hoard in the *Nibelungen Lied*.

With the eleventh canto a new hero, Ahti, or Lemminkainen, and a new cycle of adventures, is introduced. Lemminkainen is a profligate wanderer, with as many loves as Hercules. The fact that he is regarded as a form of the sea god makes it strange that his most noted achievement, the seduction of the whole female population of his island, should correspond with a like feat of Krishna's. "Sixteen thousand and one hundred," says the Vishnu Purana, "was the number of the maidens; and into so many forms did the son of Madhu multiply himself, so that every one of the damsels thought that he had wedded her in her single person." Krishna is the sun, perhaps, and the maidens are the dewdrops; it is to be hoped that Lemminkainen's connection with sea-water may save him from the solar hypothesis. His first regular marriage is unhappy, and he is slain in trying to capture a bride from the people of Pohjola. The black waters of the river of forgetfulness sweep him away, and his comb, which he left with his mother, bursts out bleeding—a frequent incident in Russian and other fairy-tales. In many household tales the hero, before setting out on a journey, erects a stick, which will fall down when he is in distress, or death. The natives of Australia use this form of divination in actual practice, tying round the stick some of the hair of the person whose fate is to be ascertained. Then, like Demeter seeking Persephonë, the mother

questions all the beings of the world, and their answers show a wonderful poetic sympathy with the silent life of Nature. "The moon said: 'I have sorrows enough of my own, without thinking of thy child. My lot is hard, my days are evil. I am born to wander companionless in the night, to shine in the season of frost, to watch through the endless winter, to fade when summer comes as king.'" The sun is kinder, and reveals the place of the hero's body. The mother collects the scattered limbs; the birds bring healing balm from the heights of heaven; and, after a hymn to the goddess of man's blood, Lemminkainen is made sound and well, as the scattered "fragments of no more a man" were united by the spell of Medea, like those of Osiris by Isis, or of the fair countess by the demon blacksmith in the Russian *Märchen*, or of the Carib hero mentioned by Mr. M'Lennan,<sup>1</sup> or of the ox in the South African household tale.

With the sixteenth canto we return to Wäinämöinen, who, like all epic heroes, visits the place of the dead, Tuonela. The maidens who play the part of Charon are with difficulty induced to ferry over a man bearing no mark of death by fire or sword or water. Once among the dead, Wainämöinen refuses—being wiser than Psyche or Persephonë—to taste of drink. This "taboo" is found in Japanese, Melanesian, and Red Indian accounts of the homes of the dead. Thus the hero is able to return and behold the stars. Arrived in the upper world, he warns men to "beware of perverting innocence, of leading astray the pure of heart; they that do these things shall be punished eternally in the depths of Tuoni. There is a place prepared for evil-doers, a bed of stones burning, rocks of fire, worms, and serpents." This speech throws but little light on the question of how far a doctrine of rewards and punishments enters into primitive

<sup>1</sup> *Fortnightly Review*, 1869: "The Worship of Plants and Animals."

dial-plate, then the back, finally the whole external case; but still the pendulum swung, still the sounds regularly succeeded. Accidentally arresting the pendulum, I found that all the phenomena disappeared; restoring its swing, I restored the phenomena. After repeating this often enough to eliminate all possibilities of coincidence I came to the conclusion that the clock-phenomena were dependent on the motion of the pendulum. This was one step, and an important one; but it was no explanation. There were two questions still to be answered: What makes the pendulum move in this manner? and how does its motion effect the observed results? Had I been deprived of the means of objective analysis, unable to take the clock to pieces, I should have been reduced to your procedure—ingenious guessing. But Observation having disclosed the ascent of one weight and descent of another, I conjectured that this motion was connected with the striking of the hours: I verified it by pulling the descending weight, and I found that, as I pulled, the hands revolved, and the sounds, previously heard at long intervals, now rapidly succeeded each other. Having laid bare the interior, I could trace the action of each part of the mechanism. I found that each beat of the pendulum detached one tooth of a wheel, and thus liberated the arrested movement of that wheel. I observed that these liberations were pulses coinciding with the tickings, and that the movements of the hands coincided with these movements of the wheel, every sixty revolutions of the wheel coinciding with each stroke of the clock. Having thus *explained* the mechanism, I rejected the idea of the clock being an organism, as a needless

and unacceptable hypothesis. I found that it resembles other mechanisms in all its essential characters, whereas it wants the primary character of an organism, that of drawing its force from Nutrition."

§ 20. Even those who may object that our scientific traveller has too obviously the advantage in this illustration will admit that the two procedures are characteristically opposed. It is in taking an object to pieces by Analysis, either real or ideal, that we learn to estimate its elements and thus to estimate the whole. The Subjective Method deduces the elements from the whole; and it is confirmed in this procedure by the success of Deductive Science. There is, however, a vital distinction between the Deductive Method and the Subjective Method, and it is this: in the former both data and conclusions are verified by confrontation with the external order. If truth is the correspondence between the order of ideas and the order of phenomena, the only right Method must be that which step by step assures the correspondence, demonstrating that the order of our ideas is also that of the phenomena they represent.

§ 21. I have still to exemplify the operation of the rival Methods by two cases that have not the drawback which may attach to imaginary illustration. The first shall be borrowed from Broussais, in his contrast of Brown's system with his own:—

A survey of the phenomena of life led both to the general conception of Excitation as the constant condition of all vital phenomena, and therefore as a comprehensive expression which resumed the general facts. Up to this point both followed the Objective Method. From this point the divergence was great:

ideas of a future state. The *Kalevala*, as we possess it, is necessarily, though faintly, tinged with Christianity; and the peculiar vices which are here threatened with punishment are not those which would have been most, likely to occur to the early heathen singers of this *runot*.

Wäinämöinen and Ilmarinen now go together to Pohjola; but the fickle maiden of the land prefers the young forger of the sampo to his elder and imperturbable companion. Like a northern Medea, or like the Master-maid in Dr. Dasent's *Tales from the Norse*, or like the hero of the Algonquin tale and the Samoan ballad, she aids her alien lover to accomplish the tasks assigned to him. He ploughs with a plough of gold the adder-close, or field of serpents; he bridles the wolf and the bear of the lower world, and catches the pike that swim in the waters of forgetfulness. After this, the parents cannot refuse their consent; the wedding feast is prepared, and all the world, except the *séduisant* Lemminkainen, is bidden to the banquet. The narrative now brings in the ballads that are sung at a Finnish marriage.

First, the son-in-law enters the house of the parents of the bride, saying, "Peace abide with you in this illustrious hall." The mother answers, "Peace be with you even in this lowly hut." Then Wäinämöinen began to sing, and no man was so hardy as to clasp hands and contend with him in song. Next follow the songs of farewell, the mother telling the daughter of what she will have to endure in a strange home: "Thy life was soft and delicate in thy father's house. Milk and butter were ready to thy hand; thou wert as a flower of the field, as a strawberry of the wood; all care was left to the pines of the forest, all wailing to the wind in the woods of barren lands. But now thou goest to another home, to an alien mother, to doors that grate strangely on their hinges." "My thoughts," the maiden replies, "are as a dark night of autumn, as a cloudy day of winter; my heart is sadder than the autumn night, more weary than the winter day." The

maid and the bridegroom are then lyrically instructed in their duties. The girl is to be long-suffering, the husband to try five years' gentle treatment before he cuts a willow wand for his wife's correction. The bridal party sets out for home; a new feast is spread, and the bridegroom congratulated on the courage he must have shown in stealing a girl from a hostile tribe.

While all is merry, the mischievous Lemminkainen sets out, an unbidden guest, for Pohjola. On his way he encounters a serpent, which he slays by the song of serpent-charming. In this "mystic chain of verse" the serpent is not addressed as the gentle reptile, god of southern peoples, but is spoken of with all hatred and loathing: "Black creeping thing of the low lands, monster flecked with the colours of death, thou that hast on thy skin the stain of the sterile soil, get thee forth from the path of a hero." After slaying the serpent, Lemminkainen reaches Pohjola, kills one of his hosts, and fixes his head on one of a thousand stakes for human skulls that stood about the house, as they might round the hut of a Dyak in Borneo. He then flees to the isle of Saari, whence he is driven for his heroic profligacy, and by the hatred of the only girl whom he has not wronged. This is a very pretty touch of human nature.

He now meditates a new incursion into Pohjola. The mother of Pohjola (it is just worth noticing that the leadership assumed by this woman points to a state of society when the family was scarcely formed) calls to her aid "her child the Frost"; but the frost is put to shame by a hymn of the invader's, a song against the Cold: "The serpent was his foster-mother, the serpent with her barren breasts; the wind of the north rocked his cradle, and the ice-wind sang him to sleep, in the midst of the wild marsh-land, where the wells of the waters begin." It is a curious instance of the animism, the vivid power of personifying all the beings and forces of nature, which marks the *Kalevala*, that the "Cold speaks

"Nous professons d'abord avec Brown, que la vie ne s'entretient que par l'excitation. Mais nous abandonnons aussitôt cet auteur, parce qu'il prend la voie de l'abstraction en dissertant toujours sur l'excitation considérée en elle-même; nous aimons mieux étudier ce phénomène dans les organes et dans les tissus qui les composent, ou plutôt observer les organes et les tissus excités."<sup>1</sup>

§ 22. Our second illustration shall be taken from the instructive though deplorable hypothesis of Spirit-rapping, which is an indelible disgrace to the education of our age.

A few persons stand round a table, gently resting their hands on it, but careful not to push in any direction. In a little while the table moves, at first slowly, afterwards with growing velocity. The persons are all of the highest respectability, above suspicion of wilful deceit. The phenomenon is so unexpected, so unprecedented, that an explanation is imperiously demanded. In presence of unusual phenomena, men are unable to remain without some explanation which shall render intelligible to them how the unusual event is produced. They are spectators merely; condemned to witness the event, unable to penetrate directly into its causes, unable to get behind the scenes and *see* the strings which move the puppets, they *guess* at what they cannot see. Man is *interprets Nature*. Whether he be metaphysician or man of science, his starting-point is the same; and they are in error who say that the metaphysician differs from the man of science in drawing his explanation from the recesses of his own mind in lieu of drawing it from the observation of facts. Both observe facts,

and both draw their interpretations from their own minds. Nay, as we have seen, there is necessarily, even in the most familiar fact, the annexation of mental inference—some formal element added by the mind, suggested by, but not given in, the immediate observation. Facts are the registration of direct observation and direct inference, congeries of particulars partly sensational, partly ideal. The scientific value of facts depends on the validity of the inferences bound up with them; and hence the profound truth of Cullen's paradox, that there are more false facts than false theories current.

The facts comprised in the phenomenon of "Table-turning" are by no means so simple as they have been represented. Let us, however, reserve all criticism, and fix our attention solely on the phenomenon, which, expressed in rigorous terms, amounts to this: the table turns; the cause of its turning is unknown. To explain this, one class of metaphysical minds refers it to the agency of an unseen Spirit. Connecting the spiritual manifestation with others which have been narrated to him, the interpreter finds no difficulty in believing that a Spirit moved the table; for "the movement assuredly issued from no human agency"; the respectable witnesses "declared they did not push." Unless the table moved itself, therefore, his conclusion must be that it was moved by a Spirit.

Minds of another class give another explanation, one equally metaphysical, although its advocates scornfully reject the spiritual hypothesis. These minds are indisposed to admit the existence of Spirits as agents in natural phenomena; but their interpretation, in spite of its employing the language of Science, is as utterly removed from scientific method as

<sup>1</sup> Broussais: *De l'Irritation*, 2nd ed. 1839, i. 55.

to Lemminkainen in human voice, and seeks a reconciliation.

At this part of the epic there is an obvious lacuna. The story goes to Kullervo, a luckless man, who serves as shepherd to Ilmarinen. Thinking himself ill-treated by the heroic smith's wife, the shepherd changes his flock into bears and wolves, which devour their mistress. Then he returns to his own home, where he learns that his sister has been lost for many days, and is believed to be dead. Travelling in search of her, he meets a girl, loves her, and all unwittingly commits an inexpiable offence. "Then," says the *Kalevala*, "came up the new dawn, and the maiden spoke, saying: 'What is thy race, bold young man, and who is thy father?' Kullervo said: 'I am the wretched son of Kalervo; but tell me, what is thy race, and who is thy father?' Then said the maiden: 'I am the wretched daughter of Kalervo. Ah! would God that I had died, then might I have grown with the green grass, and blossomed with the flowers, and never known this sorrow.' With this she sprang into the midst of the foaming waves, and found peace in Tuoni, and rest in the waters of forgetfulness." Then there was no word for Kullervo, but the bitter moan of the brother in the terrible Scotch ballad of the *Bonny Hind*; and no rest but in death by his own sword, where grass grows never on his sister's tomb.

The epic now draws to a close. Ilmarinen seeks a new wife in Pohjola, and endeavours, with Wainamoinen's help, to recover the mystic sampo. On the voyage the Runoia makes a harp out of the bones of a monstrous fish—so strange a harp that none may play it but himself. When he played all four-footed things came about him, and the white birds dropped down "like a storm of snow." The maidens of the sun and the moon paused in their weaving, and the golden thread fell from their hands. The Ancient One of the sea-water listened, and the nymphs of the wells forgot to comb their loose locks with the golden combs. All men and maidens and little children

wept, amid the silent joy of nature; nay, the great harper wept, and *of his tears were pearls made*.

In the war with Pohjola the heroes were victorious; but the sampo was broken in the fight, and lost in the sea, and that, perhaps, is "why the sea is salt." Fragments were collected, however; and Loutri, furious at the success of the heroes of Kalevala, sent against them a bear, destructive as the boar of Calydon. But Wainamoinen despatched the monster, and the body was brought home with the bear-dance, and the hymn of the bear. "O Otso," cry the singers, "be not angry that we come near thee. The bear, the honey-footed bear, was born in lands between sun and moon, and he died not by men's hands, but of his own will." The Finnish savants are probably right who find here a trace of the beast-worship which in many lands has placed the bear among the number of the stars. Propitiation of the bear is practised by Red Indians, by the Ainos of Japan, and (in the case of the "native bear") by Australians. The Red Indians have a myth to prove that the bear is immortal, does not die, but, after his apparent death, rises again in another body. There is no trace, however, that the Finns claimed, like the Danes, descent from the bear. The Lapps, a people of confused belief, worshipped him, along with Thor, Christ, the sun, and the serpent.<sup>1</sup>

But another cult, an alien creed, is approaching Kalevala. There is no part of the poem more strange than the closing canto, which tells in the wildest language, and through the most exaggerated forms of savage imagination, the tale of the introduction of Christianity. Marjatta was a maiden, "as pure as the dew is, as holy as the stars are that live without stain." As she fed her flocks, and listened to the singing of the golden cuckoo, a berry fell into her bosom. After many days she bore a child, and the people despised and rejected her.

<sup>1</sup> Mr. M'Lennan, in the *Fortnightly Review*, February, 1870.

the spiritual interpretation they despise. They attribute the phenomenon to Electricity. Connecting this supposed electrical manifestation with some other facts which seem to warrant the belief of nervous action being identical with electricity, they have no hesitation in affirming that electricity streams from the tips of the fingers. It is even suggested by one gentleman that "the nervous fluid has probably a rotatory action, and a power of throwing off some of its surplus force." How entirely these ideas of nervous fluid, rotatory power, and surplus force are additions drawn from the imagination and not supplied in the objects, I need scarcely pause to point out.

Each of these explanations has been very widely accepted by the general public. The obvious defect in both lies in the utter absence of any objective guarantee. We ought to be satisfied with no explanation which is without its valid guarantee. Before we purchase silver spoons we demand to see the mark of Silversmiths' Hall, to be assured that the spoons are silver, and not plated only. The test of the assayer dispels our misgivings. In like manner, when the motion of a table is explained by spiritual agency, instead of debating whether the spirit "bring airs from heaven or blasts from hell," we let our scepticism fall on the preliminary assumption of the spirit's presence. Prove the presence of the spirit before you ask us to go further. *If present*, the spirit is perhaps capable of producing this motion of the table; we do not know whether it is, for we know nothing about spirits; at any rate, the primary point requiring proof is the presence of the spirit; we cannot permit you to assume such a presence merely to explain such a movement; for if the fact

to be explained is sufficient proof of the explanation, we might with equal justice assume that the movement was caused by an invisible dragon who turned the table by the fanning of his awful wings. If it is permissible to draw material from the Subject, and to make such assumption valid as regards objects, our right to assume the dragon is on a par with our right to assume the spirit.

A similar initial error is observable in the electrical hypothesis. Electricity may be a less intrinsically improbable assumption, but its presence requires proof. After that step had been taken, we should require proof that electricity could comport itself with reference to tables and similar bodies in this particular manner. We have various tests for the presence of electricity; various means of ascertaining how it would act upon a table. But seeing that the gentleman who spoke so confidently of "currents issuing from the tips of the fingers" never once attempted to prove that there *were* currents; and knowing, moreover, that these currents, if present, would *not* make a table turn, all men of true scientific culture dismissed the explanation with contempt.

Such were the metaphysical explanations of the phenomenon. They are vivified by their Method. Very different was that pursued by men of science. The object sought was the unknown cause of the table's movement. To reach the unknown we must pass by the Objective Method through the avenues of the known; we must not attempt to reach it through the unknown. Is there any known fact with which this movement can be allied? The first and most obvious suggestion was that the table was pushed by the hands which rested on it. There is a

and she was thrust forth, and her babe was born in a stable, and cradled in the manger. Who should baptise the babe? The god of the wilderness refused, and Wainamöinen would have had the young child slain. Then the infant rebuked the ancient Demigod, who fled in anger to the sea; and with his magic song he built a magic barque, and he sat therein, and took the helm in his hand. The tide bore him out to sea, and he lifted his voice and sang: "Times go by, and suns shall rise and set, and then shall men have need of me, and shall look for the promise of my coming, that I may make a new sampo, and a new harp, and bring back sunlight and moonshine, and the joy that is banished from the world." Then he crossed the waters, and gained the limits of the sea, and the lower spaces of the sky.

Here the strange poem ends at its strangest moment, with the cry, which must have been uttered so often, but is heard here alone, of a people reluctantly deserting the gods that it has fashioned in its own likeness, for a faith that has not sprung from its own needs or fears. Yet it cherishes the hope that this tyranny shall pass over: "They are gods, and behold they shall die, and the waves be upon them at last."

As the *Kalevala*, and as all relics of folklore, all *Märchen* and ballads prove, the lower mythology—the elemental beliefs of the people—do survive beneath a thin covering of Christian conformity. There are, in fact, in religion, as in society, two worlds, of which the one does not know how the other lives. The class whose literature we inherit, under whose institutions we live, at whose shrines we worship, has changed as outworn raiment its manners, its gods, its laws; has looked before and after, has hoped and forgotten, has advanced from the wilder and grosser to the purest faith. Beneath the progressive class, and beneath the waves of this troublesome world, there exists an order whose primitive form of human life has been far less changeful, a class which has put on a mere semblance of new

faiths, while half-consciously retaining the remains of immemorial cults.

Obviously, as M. Fauriel has pointed out in the case of the modern Greeks, the life of such folk contains no element of progress, admits no break in continuity. Conquering armies pass and leave them still reaping the harvest of field and river; religions appear, and they are baptised by thousands, but the lower beliefs and dreads that the progressive class has outgrown remain unchanged.

Thus, to take the instance of modern Greece, the high gods of the divine race of Achilles and Agamemnon are forgotten, but the descendants of the Penestae, the *villeins* of Thessaly, still dread the beings of the popular creed, the Nereids, the Cyclopes, and the Lamia.<sup>1</sup>

The last lesson we would attempt to gather from the *Kalevala* is this: that a comparison of the *thoroughly popular* beliefs of all countries, the beliefs cherished by the non-literary classes whose ballads and fairy-tales have only recently been collected, would probably reveal a general identity, concealed by diversity of name, among the "lesser people of the skies," the elves, fairies, cyclopes, giants, nereids, brownies, lamiae. It could then be shown that some of these spirits survive among the lower beings of the mythology of what the Germans call a *Cultur-volk* like the Greeks or Romans. It could also be proved that much of the narrative element in the classic epics is to be found in a popular or childish form in primitive fairy-tales. The question would then come to be, Have the higher mythologies been developed, by artistic poets, out of the materials of a race which remained comparatively untouched by culture; or are the lower spirits, and the more simple and puerile forms of myth, degradations of the inventions of a cultivated class? In the majority of cases, the former theory is correct.

<sup>1</sup> M. Schmidt, *Volksleben der Neugriechen*, finds comparatively few traces of the worship of Zeus, and these mainly in proverbial expressions.

difficulty in the way of this explanation—namely, “that the persons declare solemnly they did *not* push; and, as persons of the highest respectability, we are bound to believe them.” Is this statement of any value? The whole question is involved in it. But the philosophical mind is very little affected by guarantees of respectability in matters implicating sagacity rather than integrity. The Frenchman assured his friend that the earth did turn round the sun, and offered his *parole d'honneur* as a guarantee; but in the delicate and difficult question of science, *paroles d'honneur* have a quite inappreciable weight. We may therefore set aside the respectability of the witnesses, and, with full confidence in their integrity, estimate the real value of their assertion, which amounts to this: they were *not conscious* of pushing. If we come to examine such a case, we find Physiology in possession of abundant examples of muscular action unaccompanied by distinct consciousness, and some of these examples are very similar to those of the unconscious pushing, which may have turned the table; and we are thus satisfied of three important points:—1. Pushing is an adequate cause, and will serve as well as either the supposed spirit or electricity to explain the movement of the table. 2. Pushing *may* take place without any distinct consciousness on the part of those who push. 3. Expectant attention is known to produce such a state of the muscles as would occasion this unconscious pushing.

Considered, therefore, as a mere hypothesis, this of unconscious pushing is strictly scientific; it may not be true, but has fulfilled the preliminary conditions. Unlike the two hypotheses it opposes, it *convinces* nothing previously unknown, or

not easily demonstrable; every position has been or may be verified; whereas the metaphysicians have not verified one of their positions: they have not proved the presence of their agents, nor have they proved that these agents, if present, would act in the required manner. Of spirit we know nothing, consequently can predicate nothing. Of electricity we know something, but what is known is *not* in accordance with the table-turning hypothesis. Of pushing we know that it can and does turn tables. All, then, that is required to convert this latter hypothesis into scientific certainty is to prove the presence of the pushing in this particular case. And it is proved in many ways, positive and negative, as I showed when the phenomenon first became the subject of public investigation. Positive, because if the hands rest on a loose table-cloth, or on substances with perfectly smooth surfaces which will glide easily over the table, the cloth or the substances will move, and not the table. Negative, because if the persons are duly *warned* of their liability to unconscious pushing, and are told to keep vigilant guard over their sensations, they do not move the table, although previously they may have moved it frequently. When we have thus verified the presence of unconscious pushing, all the links in the chain have been verified, and certainty is complete.

§ 23. Reviewing the three explanations which the phenomenon of table-turning called forth, we elicit one characteristic as distinguishing the scientific or Objective Method—namely, the *verification* of each stage in the process, the guaranteeing of each separate point, the cultivated caution of proceeding to the unknown solely through the avenues of the known. The *germinal* difference, then, between

## VII.

## THE DIVINING ROD

THERE is something remarkable, and not flattering to human sagacity, in the periodical resurrection of superstitions. Houses, for example, go on being "haunted" in country districts, and no educated man notices the circumstance. Then comes a case like that of the Drummer of Tedworth, or the Cock Lane Ghost; and society is deeply moved, philosophers plunge into controversy, and he who grubbs among the dusty tracts of the past finds a world of fugitive literature on forgotten bogies. Chairs move untouched by human hands, and tables walk about in lonely castles of Savoy, and no one marks them; till a day comes when the furniture of some American cottage is similarly afflicted, and then a shoddy new religion is based on the phenomenon. The latest revival among old beliefs is faith in the divining rod. "Our liberal shepherds give it a *shorter name*," and so do our conservative peasants, calling the "rod of Jacob" the "twig." To "work the twig" is rural English for the craft of Dousterswivel in the *Antiquary*, and perhaps from this comes our slang expression to "twig," or divine, the hidden meaning of another. Recent correspondence in the newspapers has proved that, whatever may be the truth about the "twig," belief in its powers is still very prevalent. Respectable people are not ashamed to bear signed witness to its miraculous powers of detecting springs of water and secret mines. It is habitually used by the miners in the Mendips, as Mr. Woodward found ten years ago; and forked hazel divining rods from the Mendips are a recognised part of ethnological collections. There are two ways of investigating the facts

or fancies about the rod. One is to examine it in its actual operation--a task of considerable labour, which has recently been undertaken by the Society for Psychical Research; the other, and easier way, is to study the appearances of the divining wand in history, and that is what we propose to do in this article.

When a superstition or belief is widely spread in Europe, as the faith in the divining rod certainly is (in Germany rods are hidden under babies' clothes when they are baptised), we naturally expect to find traces of it in ancient times and among savages all over the modern world. We have already examined, in "The Bull-Roarer," a very similar example. We saw that there is a magical instrument--a small fish-shaped piece of thin flat wood tied to a thong—which, when whirled in the air, produces a strange noise, a compound of roar and buzz. This instrument is sacred among the natives of Australia, where it is used to call together the men, and to frighten away the women from the religious mysteries of the males. The same instrument is employed for similar purposes in New Mexico, and in South Africa and New Zealand—parts of the world very widely distant from each other, and inhabited by very diverse races. It has also been lately discovered that the Greeks used this toy, which they called *ρόπθος*, in the Mysteries of Dionysus, and possibly it may be identical with the *mystica vannus Iacchi* (Virgil, *Georgics*, i. 166). The conclusion drawn by the ethnologist is that this object, called *turndun* by the Australians, is a very early savage invention, probably discovered and applied to religious purposes in various separate centres.

the metaphysical and scientific Methods is not that they draw their explanations from a different source, the one employing Reasoning where the other employs Observation, but that the one is content with an explanation which has no further guarantee than is given in the logical explanation of the difficulty; whereas the other imperatively demands that every assumption should be treated as provisional, hypothetical, until it has been confronted with fact, tested by acknowledged tests—in a word, *verified*. The guarantee of the metaphysician is purely logical, subjective: it is the *intellectus sibi permisus*; the guarantee of the other is derived from a correspondence of the internal with the external order. As Bacon says, all merely logical explanations are valueless, the subtlety of nature greatly surpassing that of argument: "Subtilitas nature subtilitatem argumentandi multis partibus superat"; and he further says, with his usual felicity, "Sed axiomatica à particularibus rite et ordine abstracta nova particularia rursus facilè indicant et designant." It is these "new particulars" which are reached through those already known, and complete the links of the causal chain.

Open the history of Science at any chapter you will, and its pages will show how all the errors which have gained acceptance gained it because this important principle of verification of particulars was neglected. Incessantly the mind of man leaps forward to "anticipate" Nature, and is satisfied with such anticipations if they have a logical consistence. When Galen and Aristotle thought that the air circulated in the arteries, causing the pulse to beat, and *cooling* the temperature of the blood, they were content with this plausible

anticipation; they did not verify the facts of the air's presence, and its cooling effect; when they said that the "spirituous blood" nourished the delicate organs, such as the lungs, and the "venous blood" nourished the coarser organs, such as the liver; when they said that the "spirit," which was the purer element of the blood, was formed in the left ventricle, and the venous blood in the right ventricle, they contented themselves with unverified assumptions. In like manner, when in our own day physiologists of eminence maintain that in the organism there is a Vital Force which suspends chemical actions, they content themselves with a metaphysical unverified interpretation of phenomena. If they came to rigorous confrontation with fact, they would see that, so far from chemical action being "suspended," it is incessantly at work in the organism; the varieties observable being either due to a difference of conditions (which will produce varieties out of the organism), or to the fact that the action is masked by other actions.

§ 24. If the foregoing discussion has carried with it the reader's assent, he will perceive that the distinguishing characteristic of Science is its Method of graduated Verification, and not, as some think, the employment of Induction *à la place* of Deduction. All Science is deductive, and deductive in proportion to its separation from ordinary knowledge and its co-ordination into System. The true antithesis is not between Induction and Deduction, but between *verified* and *unverified* cases of Induction and Deduction. The difference between the ancient and modern philosophies lies in the facility with which the one accepted axioms and hypotheses as the basis for its deductions, and the cultivated caution

and retained from the age of savagery in the mystic rites of Greeks, and perhaps of Romans. Well, do we find anything analogous in the case of the divining rod?

Future researches may increase our knowledge, but at present little or nothing is known of the divining rod in classical ages, and not very much (though that little is significant) among uncivilised races. It is true that in all countries rods or wands, the Latin *virga*, have a magical power. Virgil obtained his mediæval repute as a wizard because his name was erroneously connected with *virgula*, the magic wand. But we do not actually know that the ancient wand of the enchantress Circe, in Homer, or the wand of Hermes, was used, like the divining rod, to indicate the whereabouts of hidden wealth or water. In the Homeric hymn to Hermes (line 529) Apollo thus describes the *caduceus*, or wand of Hermes: "Thereafter will I give thee a lovely wand of wealth and riches, a golden wand with three leaves, which shall keep thee ever unharmed." In later art this wand, or *caduceus*, is usually entwined with serpents; but on one vase, at least, the wand of Hermes is simply the forked twig of our rustic miners and water-finders. The same form is found on an engraved Etruscan mirror.<sup>1</sup>

Now, was a wand of this form used in classical times to discover hidden objects of value? That wands were used by Scythians and Germans in various methods of casting lots is certain; but that is not the same thing as the working of the twig. Cicero speaks of a fabled wand by which wealth can be procured; but he says nothing of the method of its use, and possibly was only thinking of the rod of Hermes, as described in the Homeric hymn already quoted. There was a Roman *satura*, by Varro, called "Virgula Divina"; fragments remain, but throw no light on the subject. A passage usually quoted from

Seneca has no more to do with the divining rod than with the telephone. Pliny is a writer extremely fond of marvels; yet, when he describes the various modes of finding wells of water, he says nothing about the divining wand. The isolated texts from Scripture which are usually referred to clearly indicate wands of a different sort, if we except Hosea iv. 12, the passage used as motto by the author of *Lettres qui dévoient l'illusion des Philosophes sur la Baguette* (1696). The text is translated in our Bible, "My people ask counsel at their stocks, and their staff declareth unto them." Now, we have here no reference to the search for wells and minerals, but to a form of divination for which the modern twig has ceased to be applied. In rural England people use the wand to find water, but not to give advice, or to detect thieves or murderers; but, as we shall see, the rod has been very much used for these purposes within the last three centuries.

This brings us to the moral powers of the twig; and here we find some assistance in our inquiry from the practices of uncivilised races. In 1719 John Bell was travelling across Asia; he fell in with a Russian merchant, who told him of a custom common among the Mongols. The Russian had lost certain pieces of cloth, which were stolen out of his tent. The Kutuchtu Lama ordered the proper steps to be taken to find out the thief.

One of the Lamas took a bench with four feet, and, after turning it in several directions, at last it pointed directly to the tent where the stolen goods were concealed. The Lama now mounted across the bench, and soon carried it, or, as was commonly believed, it carried him, to the very tent, where he ordered the damask to be produced. The demand was directly complied with; for it is vain in such cases to offer any excuse.<sup>1</sup>

Here we have not a wand, indeed, but a wooden object which turned in the direction not of water or minerals, but

<sup>1</sup> Preller, *Ausgewählte Aufsätze*, p. 154.

<sup>1</sup> Tylor, *Prim. Cult.*, ii. 156. Pinkerton, vii. 357.

with which the other insists on verifying its axioms and hypotheses before deducing conclusions from them.<sup>1</sup> We guess as freely as the ancients; but we know that we are guessing; and if we chance to forget it, our rivals quickly remind us that our guess is not evidence. Without guessing, Science would be impossible. We should never discover new islands did we not often venture seawards with intent to sail beyond the sunset. To find new land, we must often quit sight of land. As Dr. Thomson admirably expresses it: "Philosophy proceeds upon a system of credit, and if she never advanced beyond her tangible capital, our wealth would not be so enormous as it is."<sup>2</sup> While both metaphysician and man of science trade on a system of credit, they do so with profoundly different views of its aid. The metaphysician is a merchant who speculates boldly, but without that convertible capital which can enable him to meet his engagements. He gives bills, yet has no gold, no goods to answer for them; these bills are not representative of wealth which exists in any warehouse. Magnificent as his speculations seem, the first obstinate creditor who insists on payment makes him bankrupt. The man of science is also a venturesome merchant, but one fully alive to the necessity of solid capital which can on emergency be produced to meet his bills; he knows the risks he runs whenever that amount of capital is ex-

ceeded; he knows that bankruptcy awaits him if capital be not forthcoming.

§ 25. Astronomy became a science when men began to seek the unknown through the known, and to interpret celestial phenomena by those laws which were recognised on the surface of the earth. Geology became possible as a science when its principal phenomena were explained by those laws of the action of water, visibly operating in every river, estuary, and bay. Except in the grandeur of its sweep, the mind pursues the same course in the interpretation of geological facts which record the annals of the universe, as in the interpretation of the ordinary incidents of daily life. To read the pages of the great *Stone-book*, and to perceive from the wet streets that rain has recently fallen, are the same intellectual processes. In the one case the mind traverses immeasurable spaces of time, and infers that the phenomena were produced by causes similar to those which have produced similar phenomena within recent experience; in the other case, the mind similarly infers that the wet streets and swollen gutters have been produced by the same cause we have frequently observed to produce them. Let the inference span with its mighty arch a myriad of years, or span but a few minutes, in each case it rises from the ground of certain familiar indications, and reaches an antecedent known to be capable of producing these indications. Both inferences may be wrong: the wet streets may have been wetted by a water-cart, or by the bursting of a pipe. We cast about for some other indication of rain besides the wetness of the streets and the turbid rush of gutters, which might equally have been produced by the bursting of a water-pipe. If we see

<sup>1</sup> Mr. Bayma, *Molecular Mechanics*, 1866, p. 3, speaks of those "modern thinkers who despise the deductive method as a useless relic of the past." They must be very shallow thinkers who do not see that it is the Subjective, not the Deductive, Method which is the useless relic of the past.

<sup>2</sup> Thomson: *Outlines of the Laws of Thought*, p. 312.

of human guilt. A better instance is given by the Rev. H. Rowley, in his account of the Mauganja.<sup>1</sup> A thief had stolen some corn. The medicine-man, or sorcerer, produced two sticks, which he gave to four young men, two holding each stick. The medicine-man danced and sang a magical incantation, while a zebra-tail and a rattle were shaken over the holders of the sticks.

After a while, the men with the sticks had spasmotic twitchings of the arms and legs; these increased nearly to convulsions.....According to the native idea, *it was the sticks which were possessed primarily*, and through them the men, *who could hardly hold them*. The sticks whirled and dragged the men round and round like mad, through bush and thorny shrub, and over every obstacle; nothing stopped them; their bodies were torn and bleeding. At last they came back to the assembly, whirled round again, and rushed down the path to fall panting and exhausted in the hut of one of a chief's wives. The sticks, rolling to her very feet, denounced her as a thief. She denied it; but the medicine-man answered, "The spirit has declared her guilty; the spirit never lies."

The woman, however, was acquitted, after a proxy trial by ordeal: a cock, used as her proxy, threw up the *muavi*, or ordeal-poison.

Here the points to be noted are, first, the violent movement of the sticks, which the men could hardly hold; next, the physical agitation of the men. The former point is illustrated by the confession of a civil engineer writing in the *Times*. This gentleman had seen the rod successfully used for water; he was asked to try it himself, and he determined that it should not twist in his hands "if an ocean rolled under his feet." Twist it did, however, in spite of all his efforts to hold it, when he came above a concealed spring. Another example is quoted in the *Quarterly Review*, vol. xxii., p. 374. A narrator, in whom the editor "had implicit

confidence," mentions how, when a lady held the twig just over a hidden well, "the twig turned so quick as to snap, breaking near her fingers." There seems to be no indiscretion in saying, as the statement has often been printed before, that the lady spoken of in the *Quarterly Review* was Lady Millbanke, mother of the wife of Byron. Dr. Hutton, the geologist, is quoted as a witness of her success in the search for water with the divining rod. He says that, in an experiment at Woolwich, "the twigs twisted themselves off below her fingers, which were considerably indented by so forcibly holding the rods between them."<sup>1</sup> Next, the violent excitement of the four young men of the Mauganja is paralleled by the physical experience of the lady quoted in the *Quarterly Review*. "A degree of agitation was visible in her face when she first made the experiment; she says this agitation was great" when she began to practise the art, or whatever we are to call it. Again, in *Lettres qui découvrent l'illusion* (p. 93), we read that Jacques Aymar (who discovered the Lyons murderer in 1692) *se sent tout ému*—feels greatly agitated—when he comes on that of which he is in search. On page 97 of the same volume the body of the man who holds the divining rod is described as "violently agitated." When Aymar entered the room where the murder, to be described later, was committed, "his pulse rose as if he were in a burning fever, and the wand turned rapidly in his hands" (*Lettres*, p. 107). But the most singular parallel to the performance of the African wizard must be quoted from a curious pamphlet already referred to, a translation of the old French *Verge de Jacob*, written, annotated, and published by a Mr. Thomas Welton. Mr. Welton seems to have been a believer in mesmerism, animal magnetism, and similar doctrines; but the coincidence of his story with that of the African sorcerer is none the less

<sup>1</sup> *Universities Mission to Central Africa*, p. 217. *Prim. Cult.*, ii. 156, 157.

<sup>1</sup> Quoted in *Jacob's Rod*: London, n.d., a translation of *La Verge de Jacob*, Lyon, 1693.

passers-by carrying wet umbrellas, some still held above the head, our inference is strengthened by this indication that rain, and no other cause, produced the phenomena. In like manner, the geologist casts about for other indications besides those of the subsidence of water, and as they accumulate his conviction strengthens.

§ 26. While this is the course of Science, the course of Metaphysics is very different. Its inferences start from no well-grounded basis; the arches they throw are not from known fact to unknown fact, but from some unknown to some other unknown. Deductions are drawn from the nature of God, the nature of Spirit, the essences of Things, and from what Reason can postulate. Rising from such mists, the arch so brilliant to look upon is after all a rainbow, not a bridge.

To make his method legitimate, the metaphysician must first prove that a coordinate correspondence exists between Nature and his Intuitional Reason,<sup>1</sup> so that whatever is true of the one must be true of the other. The geologist, for example, proceeds on the assumption that the action of waters was essentially the same millions of years ago as it is in the present day; so that whatever can be positively proved of it *now* may be confidently asserted of it *then*. He subsequently brings evidence to corroborate

his assumption by showing that the assumption is necessary and competent to explain facts not otherwise to be consistently explained. But does the metaphysician stand in a similar position? Does he show any validity in his preliminary assumption? Does he produce any evidence for the existence of a nexus between his Intuitional Reason and those noumena or essences about which he reasons? Does he show the probability of there being such a correspondence between the two that what is true of the one may be accepted as probable of the other? Nothing of the kind. He assumes that it is so. He assumes, as a preliminary to all Philosophy, that Intuitional Reason is competent to deliver verdicts, even when the evidence is entirely furnished by itself. He assumes that his Intuitions are face to face with Existences, and have consequently immediate knowledge of them. But this immense assumption, this gratuitous begging of the whole question, can only be permitted after a demonstration that the *contrary* assumption must be false. Now, it is certain that we can assume the contrary, and assume it on evidence as cogent as that which furnishes his assumption. I can assume that Intuitions are not face to face with Existences; indeed, this assumption seems to me by far the most probable; and it is surely as valid as the one it opposes? I call upon the metaphysician to prove the validity of his assumption, or the invalidity of mine. I call upon him for some principle of verification. He may tell me (as in past years the Hegelians used to tell me, not without impatience) that "Reason must verify itself"; but unhappily Reason has no such power; for if it had, Philosophy would not be disputing about first principles; and

<sup>1</sup> By Intuitional Reason I here wish to express what the Germans call *Vernunft*, which they distinguish from *Verstand*, as Coleridge tried to make Englishmen distinguish between Reason and Understanding. The term Reason is too deeply rooted in our language to be twisted into any new direction; and I hope by the unusual "Intuitional Reason" to keep the reader's attention alive to the fact that by it is designated the process of the mind engaged in transcendental inquiry.

remarkable. It is a coincidence which must almost certainly be "undesigned." Mr. Welton's wife was what modern occult philosophers call a "Sensitive." In 1851 he wished her to try an experiment with the rod in a garden, and sent a maid-servant to bring "a certain stick that stood behind the parlour door. In great terror she brought it to the garden, her hand firmly clutched on the stick, nor could she let go....." The stick was given to Mrs. Welton, "and it drew her with very considerable force to nearly the centre of the garden, to a bed of poppies, where she stopped." Here water was found, and the gardener, who had given up his lease as there was no well in the garden, had the lease renewed.

We began by giving evidence to show (and much more might be adduced) that the belief in the divining rod, or in analogous instruments, is not confined to the European races. The superstition, or whatever we are to call it, produces the same effects of physical agitation, and the use of the rod is accompanied with similar phenomena, among Mongols, English people, Frenchmen, and the natives of Central Africa. The same coincidences are found in almost all superstitious practices, and in the effects of these practices on believers. The Chinese use a form of *planchette*, which is half a divining rod—a branch of the peach-tree; and "spiritualism" is more than three-quarters of the religion of most savage tribes, a Maori *séance* being more impressive than anything the civilised Sludge can offer his credulous patrons. From these facts different people draw different inferences. Believers say that the wide distribution of their favourite mysteries is a proof that "there is something in them." The incredulous look on our modern "twigs" and turning-tables and ghost stories as mere "survivals" from the stage of savage culture, or want of culture, when the fancy of half-starved man was active and his reason uncritical.

The great authority for the modern

history of the divining rod is a work published by M. Chevreul, in Paris, in 1854. M. Chevreul, probably with truth, regarded the wand as much on a par with the turning-tables, which, in 1854, attracted a good deal of attention. He studied the topic historically, and his book, with a few accessible French tracts and letters of the seventeenth century, must here be our guide. A good deal of M. Chevreul's learning, it should be said, is reproduced in Mr. Baring Gould's *Curious Myths of the Middle Ages*, but the French author is much more exhaustive in his treatment of the topic. M. Chevreul could find no earlier book on the twig than the *Testament du Frère Basil Valentin*, a holy man who flourished (the twig) about 1413, but whose treatise is possibly apocryphal. According to Basil Valentin, the twig was regarded with awe by ignorant labouring men, which is still true. Paracelsus, though he has a reputation for magical daring, thought the use of the twig "uncertain and unlawful"; and Agricola, in his *De Re Metallica* (1546), expresses a good deal of scepticism about the use of the rod in mining. A traveller of 1554 found that the wand was *not* used—and this seems to have surprised him—in the mines of Macedonia. Most of the writers of the sixteenth century accounted for the turning of the rod by "sympathy," which was then as favourite an explanation of everything as evolution is to-day. In 1630 the Baron de Beau Soleil of Bohemia (his name sounds rather Bohemian) came to France with his wife, and made much use of the rod in the search for water and minerals. The Baroness wrote a little volume on the subject, afterwards reprinted in a great storehouse of this lore, *La Physique Occulte*, of Vallemont. Kircher, a Jesuit, made experiments which came to nothing; but Gaspard Schott, a learned writer, cautiously declined to say that the Devil was always "at the bottom of it" when the rod turned successfully. The problem\* of the rod

when it claims the power, who is to answer for its accuracy, *quis custodiet ipsos custodes?* If Ontology is possible, its only basis rests on the *assumed* correspondence of the external and internal orders, a basis shown by Psychology to be excessively treacherous. If all concepts are reducible to percepts, and our widest generalisations are only Re-presentations of what originally was Presentation, Ontology has no standing place. Its data are figments—subjective constructions in which formal elements are transmuted into material elements, relations are transformed into objects, abstractions are personified and endowed with reality.

§ 27. The objects with which Ontology concerns itself do not admit of Presentation (*Anschauung*), consequently its conclusions are incapable of being verified. We can never know whether the assumed correspondence between the order in our thoughts and the order in things is a real correspondence. For example, Cause is a concept constructed out of formal elements—an inference which posits the reality of something over and above the unconditional antecedence and sequence given in Experience. Let us admit the reality; we cannot safely proceed beyond the inference; we cannot justify our transformation of this inference into an object having\* knowable qualities; we are not entitled to found inferences on this inference. Cause then remains a nebulous thought. If we attempt to define it, our definitions will be arbitrary; if we attempt to deduce from it, our deductions will be figments. Herein lies the distinction between Mathematics and Metaphysics: the one can, and the other cannot, be reduced to Presentation; the one has, and the other has not, an objective basis and a constant verification. The material

elements of Mathematics are physical facts gained through Sense; the formal elements are simply serial dispositions of the objects; and thus the widest reaches of mathematical speculation are only the *writing out* of objective knowledge, the development of identical propositions.<sup>1</sup>

§ 28. Metaphysicians proceed on the assumption that Intuitive Reason, which is independent of Experience, is absolute and final in its guarantee. The validity of its conclusions is self-justified. Hegel boldly says, “Whatever is rational is real, and whatever is real is rational—*das Vernünftige ist wirklich und das Wirkliche vernünftig.*” And writers of less metaphysical rigour frequently avow the axiom, and always imply it. Thus in a remarkable article on Sir W. Hamilton, which appeared in the *Prospective Review*, we read that Philosophy in England has dwindled down to mere Psychology and Logic, whereas its proper business is with the notions of Time, Space, Substance, Soul, God; “to pronounce upon the validity of these notions as revelations of real Existence, and, if they be reliable, use them as a bridge to cross the chasm from relative Thought to absolute Being. Once safe across, and gazing about it in that realm, the mind stands in presence of the objects of Ontology.”

“Once safe across”; this is indeed the step which constitutes the whole journey; unhappily we have no means of getting safe across; and in this helplessness we had better hold ourselves aloof

\* On the contrast between Mathematics and Metaphysics, see the admirable essay of Kant: *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral*; and Apelt: *Die Metaphysik*, § 6. Compare Mansel: *Metaphysics*, p. 285. I have argued the point more fully in the chapter on Spinoza, in the *History of Philosophy*, vol. ii., pp. 211-215.

was placed before our own Royal Society by Boyle, in 1666; but the Society was not more successful here than in dealing with the philosophical difficulty proposed by Charles II. In 1679 De Saint Romain, deserting the old hypothesis of secret "sympathies," explained the motion of the rod (supposing it to move) by the action of *corpuscles*. From this time the question became the playing-ground of the Cartesian and other philosophers. The struggle was between theories of "atoms," magnetism, "corpuscles," electric effluvia, and so forth, on one side, and the immediate action of devils or of conscious imposture, on the other. The controversy, comparatively simple as long as the rod only indicated hidden water or minerals, was complicated by the revival of the savage belief that the wand could "smell out" moral offences. As long as the twig turned over material objects, you could imagine sympathies and "effluvia" at pleasure. But when the wand twirled over the scene of a murder, or dragged the expert after the traces of the culprit, fresh explanations were wanted. Le Brun wrote to Malebranche on July 8th, 1689, to tell him that the wand only turned over what the holder had the *intention* of discovering.<sup>1</sup> If he were following a murderer, the wand good-naturedly refused to distract him by turning over hidden water. On the other hand, Vallemont says that, when a peasant was using the wand to find water, it turned over a spot in a wood where a murdered woman was buried, and it conducted the peasant to the murderer's house. These events seem inconsistent with Le Brun's theory of *intention*. Malebranche replied, in effect, that he had only heard of the turning of the wand over water and minerals; that it then turned (if turn it did) by virtue of some such force as electricity; that, if such force existed, the wand would turn over open water. But it does not so turn; and, as physical causes are

constant, it follows that the turning of the rod cannot be the result of a physical cause. The only other explanation is an intelligent cause—either the will of an impostor or the action of a spirit. Good spirits would not meddle with such matters; therefore, either the Devil or an impostor causes the motion of the rod, if it *does* move at all. This logic of Malebranche's is not agreeable to believers in the twig; but there the controversy stood till, in 1692, Jacques Aymar, a peasant of Dauphiné, by the use of the twig discovered one of the Lyons murderers.

Though the story of this singular event is pretty well known, it must here be briefly repeated. No affair can be better authenticated, and our version is abridged from the "Relations" of "Monsieur le Procureur du Roi, Monsieur l'Abbé de la Garde, Monsieur Panthot, Doyen des Médecins de Lyon, et Monsieur Aubert, Avocat célèbre."

On July 5th, 1692, a vintner and his wife were found dead in the cellar of their shop at Lyons. They had been killed by blows from a hedging-knife, and their money had been stolen. The culprits could not be discovered, and a neighbour took upon him to bring to Lyons a peasant out of Dauphiné, named Jacques Aymar, a man noted for his skill with the divining rod. The Lieutenant-Criminel and the Procureur du Roi took Aymar into the cellar, furnishing him with a rod of the first wood that came to hand. According to the Procureur du Roi, the rod did not move till Aymar reached the very spot where the crime had been committed. His pulse then rose, and the wand twisted rapidly. "Guided by the wand, or by some internal sensation," Aymar now pursued the track of the assassins, entered the court of the Archbishop's palace, left the town by the bridge over the Rhone, and followed the right bank of the river. He reached a gardener's house, which he declared the men had entered; and some children confessed that three men (*whom they*

<sup>1</sup> *Letters sur la Baguette*, pp. 106-12.

from the attempt. If a man were to discourse with amplitude of detail and eloquence of conviction respecting the inhabitants of Sirius, setting forth in explicit terms what they were like, what embryonic forms they passed through, what had been the course of their social evolution, and what would be its ultimate stage, we should first ask, And pray, Sir, what *evidence* have you for these particulars? what guarantee do you offer for the *validity* of these conclusions? If he replied that Intuitive Reason assured him *these* things must be so from the inherent necessities of the case, he having logically evolved *these* conclusions from the data of Reason, we should suppose him to be either attempting to mystify us, or to be hopelessly *insane*. Nor would this painful impression be removed by his proceeding to affirm that he never thought of trusting to such fallacious arguments as could be furnished by Observation and Experiment—tests wholly inapplicable to objects so remote from all experience, and accessible only by Reason. 2767

In the present day, speculations on the Metaphysical Method are not, intrinsically, more rational than theories respecting the development of animated beings peopling Sirius; nay, however masked by the ambiguities of language and old familiarities of speculation, the attempt is really less rational, the objects being even less accessible. Psychology has taught us one lesson at least—namely, that we cannot know causes and essences, because Experience is limited to sequences and phenomena. Nothing is gained by despising Experience, and seeking refuge in Intuitive Reason. The senses may be imperfect channels, but at any rate they are in direct communication with their objects, and are

true up to a certain point. The error arising from one sense may be corrected by another; what to the eye appears round, the hand feels to be square. But Intuitive Reason has no such safeguard. It has only itself to correct its own errors. Holding itself aloof from the corroborations of Sense, it is aloof from all possible verification, because it cannot employ the test of confrontation with fact.

This conviction has been growing slowly. It could never have obtained general acceptance until the Metaphysical Method had proved its incapacity by centuries of failure. In the course of the history of philosophy we shall see the question of Certitude continually forced upon philosophers, always producing a crisis in speculation, although always again eluded by the more eager and impatient intellects. Finally, these repeated crises disengage the majority of minds from so hopeless a pursuit, and set them free to follow Science which *has* Certitude.

§ 29. History with overwhelming evidence proves the incompetence of the Subjective Method; Psychology with irresistible force displays the cause. It is a common mistake to suppose that this Method is followed by metaphysicians exclusively; they, indeed, have uniformly employed it, and were forced by the nature of their inquiries to employ it; but savans unhappily have shown a fatal facility in employing it likewise, and have thereby obstructed the advance of knowledge. All we can say is that only on the Objective Method has Science been successful; because only by the verification of conceptions can Truth—which is the correspondence of the internal and external orders—be reached.

With the validity of the Subjective

*described)* had come into the house one Sunday morning. Aymar followed the track up the river, pointed out all the places where the men had landed, and, to make a long story short, stopped at last at the door of the prison of Beaucaire. He was admitted, looked at the prisoners, and picked out as the murderer a little hunchback (had the children described a hunchback?) who had just been brought in for a small theft. The hunchback was taken to Lyons, and he was recognised on the way by the people at all the stages where he had stopped. At Lyons he was examined in the usual manner, and confessed that he had been an accomplice in the crime, and had guarded the door. Aymar pursued the other culprits to the coast, followed them by sea, landed where they had landed, and only desisted from his search when they crossed the frontier. As for the hunchback, he was broken on the wheel, being condemned on his own confession. It does not appear that he was put to the torture to make him confess. If this had been done, his admissions would, of course, have been as valueless as those of the victims in trials for witchcraft.

This is, in brief, the history of the famous Lyons murders. It must be added that many experiments were made with Aymar in Paris, and that they were all failures. He fell into every trap that was set for him; detected thieves who were innocent, failed to detect the guilty, and invented absurd excuses; alleging, for example, that the rod would not indicate a murderer who had confessed, or who was drunk when he committed his crime. These excuses seem to annihilate the wild contemporary theory of Chauvin and others, that the body of a murderer naturally exhales an invisible *matière meurtrière*—peculiar indestructible atoms, which may be detected by the expert with the rod. Something like the same theory, we believe, has been used to explain the pretended phenomena of haunted houses. But the wildest philosophical credulity is staggered by a *matière meurtrière* which

is disengaged by the body of a sober, but not by that of an intoxicated, murderer, which survives tempests in the air, and endures for many years, but is dissipated the moment the murderer confesses. Believers in Aymar have conjectured that his real powers were destroyed by the excitements of Paris, and that he took to imposture; but this is an effort of too easy good-nature. When Vallemont defended Aymar (1693) in the book called *La Physique Occulite*, he declared that Aymar was physically affected to an unpleasant extent by *matière meurtrière*, but was not thus agitated when he used the rod to discover minerals. We have seen that, if modern evidence can be trusted, holders of the rod are occasionally much agitated even when they are only in search of wells. The story gave rise to a prolonged controversy, and the case remains a judicial puzzle, but little elucidated by the confession of the hunchback, who may have been insane, or morbid, or vexed by constant questioning till he was weary of his life. He was only nineteen years of age.

The next use of the rod was very much like that of "tipping" and turning tables. Experts held it (as did Le Père Ménestrier, 1694), questions were asked, and the wand answered by turning in various directions. By way of showing the inconsistency of all philosophies of the wand, it may be said that one girl found that it turned over concealed gold if she held gold in her hand, while another found that it indicated the metal so long as she did *not* carry gold with her in the quest. In the search for water, ecclesiastics were particularly fond of using the rod. The Maréchal de Boufflers dug many wells, and found no water, on the indications of a rod in the hands of the Prieur de Dorenc near Guise. In 1700 a curé, near Toulouse, used the wand to answer questions, which, like *planchette*, it often answered wrongly. The great *sorcier*, or water-finder, of the eighteenth century was one Bleton. He declared that the

Method stands or falls the truth of Metaphysics, since that is the Method which alone can be employed in such inquiries. There are three grand divisions of Metaphysics, and these are Psychology, Cosmology, and Theology. It is possible to treat all three on the Objective Method by restricting them to their corresponding phenomena, and waiving all inquiry into essential causes; but this is Science, and for the present we are dealing with Metaphysics; we will therefore follow Wolf, and adopt the scholastic terms, Rational Psychology, Rational Cosmology, and Rational Theology. And as many of my readers will probably be more disposed to accept Mr. Mansel's criticism of these delusive efforts to transcend Experience than a criticism from the positive point of view, I will here borrow his remarks:—

"The aim of Rational Psychology is to frame definitions exhibiting the essential nature of the soul and its properties, as realities conceived by the intellect, underlying and implied by the phenomena presented in consciousness; and to prove by a demonstrative process that the notions thus defined necessarily flow one from another. Psychology is thus raised from a science of observation to one of demonstration [more accurately, from a science of observation to one of inference and deduction from inferences]; and its objects are transformed from phenomena presented in experience to realities contemplated by the intellect. The soul, by virtue of its essential nature as a simple substance, is shown to possess, of necessity, certain attributes as rationally conceived and defined—such as sense, imagination, intelligence, will, spirituality, indestructibility, and so forth; and the same conclusions are even demonstrated of other spiritual natures

which partake of the generic attribute of the soul." Mr. Mansel hereupon observes: "The weakness of the whole process is that it tacitly postulates as its starting-point a principle which is neither evident in itself, nor such as can be made evident by any process of thought. It assumes, that is to say, a transcendental definition of the real nature of the soul beyond and above the facts and relations which are manifested in consciousness. But how is the truth of such a definition to be guaranteed? Of the soul as a simple substance, apart from its particular modification, consciousness tells us nothing. How, then, is the abstract conception of the nature of the soul to be verified? It cannot be self-evident; for self-evidence is nothing more than the instantaneous assent of consciousness; and the assumption in question cannot be submitted to the judgment of consciousness at all. It cannot be demonstrable; for it could only be demonstrated by the assumption of a higher notion of the same kind, concerning which the same question would then have to be raised. It cannot be generalised from experience; for experience deals with the facts of consciousness only, and tells us not of what *must be*, but only of what *is* or *seems to be*. Unable to verify his fundamental definition by any reference to the reality which it is supposed to represent, the metaphysician is compelled to confine himself to the relations of the language by which it is represented."<sup>1</sup>

Mr. Mansel then examines Rational Cosmology, showing that it can "contain nothing more than an analysis of general notions, and can lead to no conclusions but such as the philosopher has himself virtually assumed in his premises. The

<sup>1</sup> Mansel: *Metaphysics*, p. 293.

rod was a mere index, and that physical sensations of the searcher communicated themselves to the wand. This is the reverse of the African theory, that the stick is inspired, while the men who hold it are only influenced by the stick. On the whole, Bleton's idea seems the less absurd; but Bleton himself often failed when watched with scientific care by the incredulous. Paramelle, who wrote on methods of discovering wells, in 1856, came to the conclusion that the wand turns in the hands of certain individuals of peculiar temperament, and that it is very much a matter of chance whether there are or are not wells in the places where it turns.

If there are no phenomena of this sort at all, it is remarkable that the belief in them is so widely diffused. But if the phenomena are purely subjective, owing to the conscious or unconscious action of nervous patients, then they are precisely of the sort which the cunning medicine-man observes, and makes his profit out of, even in the earliest stages of society. Once introduced, these practices never die out among the conservative and unprogressive class of peasants; and every now and then they attract the curiosity of philosophers, or win the belief of the credulous among the educated classes. Then comes, as we have lately seen, a revival of ancient superstition. For it were as easy to pluck the comet out of the sky by the tail as to eradicate superstition from the mind of man.

Perhaps one good word may be said for the divining rod. Considering the chances it has enjoyed, the rod has done less mischief than might have been expected. It might very well have become in Europe, as in Asia and Africa, a kind of ordeal, or method of searching for and trying malefactors. Men like Jacques Aymar might have played, on a larger scale, the part of Hopkins, the witch-finder. Aymar was, indeed, employed by some young men to point out, by help of the wand, the houses of ladies who had been more

frail than faithful. But at the end of the seventeenth century, in France, this research was not regarded with favour, and put the final touch on the discomfiture of Aymar. So far as we know, the hunchback of Lyons was the only victim of the "twig" who ever suffered in civilised society. It is true that in rural England the movements of a Bible, suspended like a pendulum, have been thought to point out the guilty. But even that evidence is not held good enough to go to a jury. Since this sketch was written the great work on *The So-called Divining Rod*, by Professor W. T. Barrett, has superseded the previous studies.<sup>1</sup> Mr. Barrett's book contains an excellent history of the rod in the past. It is peculiarly piquant to find that the violent "anti-clerical" and eminent paleontologist, Monsieur de Mortillet, was himself a "dowser," and exercised a faculty for which he could not account. Mr. Barrett gives a large account of experiments, mainly in water-findings, by professionals and amateurs, to which (in the case of amateurs) I could add freely. In my experience (or rather according to my information at first hand) the amateurs find not only water, but almost anything, including the tracks of human beings, which they set themselves to seek. Mr. Barrett made especial inquiry for *failures* by water-seekers, and considers them carefully. In his opinion the movement of the rod (or the sensation, when the rod is used) is caused by involuntary and unconscious muscular movements, automatically betraying and indicating knowledge existing in the sub-consciousness. How the knowledge reached the sub-consciousness is another question. The rod, in fact, is only one mode of stimulating "automatisms," and bringing to the surface evidence of faculties concealed in "the abysmal depths of personality." Other methods are automatic writing, crystal-gazing, and modes known

<sup>1</sup> *Proceedings of the Society for Psychical Research.*

abstract notion of the world contains implicitly whatever attributes we choose to assume as its constituents; and the metaphysical or logical analysis of that notion can contain no more."

Still more incisive is his criticism on Rational Theology, which starts from a nominal definition of the Deity. "How do we know," he asks, "that our conception at all corresponds to the nature of the Being whom it professes to represent?"

§ 30. It is the slow rise of the Objective Method and its gradual extension into regions formerly occupied by the Subjective Method which the history of philosophy will have to exhibit; and the

exposition will be twofold, showing the failures of the one Method and the successes of its rival. Thus will be established the conclusion that no problem merits our attention unless its solution is verifiable, and all problems are unverifiable on the Subjective Method.

But on what does Verification rest? Before this can be answered it is requisite to discuss the much-debated question of the origin of knowledge. Have we any higher source than Experience? Is there a fountain of Truth which springs from a source independent of Experience? I shall have to treat this question by and by, but it is needed first to consider the nature of our Test of Truth.

### III.—THE TEST OF TRUTH

§ 31. TRUTH being the correspondence between the internal and external order, what is the test of that correspondence? Widely as philosophers differ respecting the origin and scope of knowledge, they are unanimous in affirming that the ultimate test must lie in the verdict of Consciousness, whether the verdicts of Consciousness are, or are not, conformable with Objective Reality. Now, Consciousness is a word of delusive vagueness, and moreover some of its "verdicts" are confessedly false; the question thus arises, Which are certainly true? Metaphysicians implicitly, and sometimes explicitly,<sup>1</sup>

assume that all "clear and distinct ideas" are true; an assumption which ill accords with the clearness and distinctness of hallucinations, and many false hypotheses. But those who are unprepared for so facile and delusive an answer as this, and who recognise that Consciousness may on occasions deliver false verdicts, desire to fix some criterion of its infallibility, when it is infallible.

A startling result discloses itself: Consciousness is only infallible in verdicts limited to identical propositions, or perhaps the better phrase would be propositions of equivalence—e.g., "A is A," "whatever is is."<sup>2</sup> Here, and only here, there is no fallibility. No possibility of error weakens an identical proposition.

<sup>1</sup> As the Cartesians. It is thus boldly stated by Tschirnhausen: "verum est quidquid concipi potest; falsum vero quod non concipi potest."—*De Medicina Mantis*, 1687, quoted by Ueberweg: *Logik*. This canon receives its full illustration in Hegel.

<sup>2</sup> χρή τὸ λέγειν τε νοεῖν τ' εἰν Εμμεναι. Parmenides: Fragm. v. 43.

to savages, such as boat-tilting on water. As regards unconscious muscular action, the divining rod once kicked up in my own hands, *against* all the muscular pressure of which I was conscious. What muscles worked it against the muscles which I knew that I was exerting, I cannot conceive.

The rod has been much used for water-finding by corporations, companies, colleges, landowners, and other persons who say that, whatever the system of the process, the water-finder "gets there all the same," and, as long as he does so,

they do not care how he managed it. In cases known to me, a squire, a land agent, and a ground bailiff, under pressure of demand for water, have tried the rod themselves, with singular success. It happens, not infrequently, that if an expert holds the wrists of a neophyte who holds the rod, the rod turns in the neophyte's hands. This may be attributed, in a general way, to suggestion; neither this process nor the traditional Celtic way of communicating the vision in second sight has so far succeeded in my own case.

## VIII.

### THE ART OF SAVAGES<sup>1</sup>

"AVOID Coleridge—he is *useless*," says Mr. Ruskin. Why should the poetry of Coleridge be useful? The question may interest the critic, but we are only concerned with Mr. Ruskin here—for one reason. His disparagement of Coleridge as "useless" is a survival of the belief that art should be "useful." This is the savage's view of art. He imitates nature in dance, song, or in plastic art, for a definite practical purpose. His dances are magical dances, his images are made for a magical purpose, his songs are incantations. Thus the theory that art is a disinterested expression of the imitative faculty is scarcely warranted by the little we know of art's beginnings. We shall adopt, provisionally, the hypothesis that the earliest art with which we are acquainted is that of savages, contemporary or extinct. Some philosophers may tell us that all known savages are only

degraded descendants of early civilised men, who have, unluckily and inexplicably, left no relics of their civilisation. But we shall argue, on the opposite theory, that the art of Australians, for example, is really earlier in kind, more backward, nearer the rude beginnings of things, than the art of people who have attained to some skill in pottery, like the New Caledonians. These, again, are much more backward, in a state really much earlier, than the old races of Mexico and Peru; while they, in turn, show but a few traces of advance towards the art of Egypt; and the art of Egypt, at least after the times of the Ancient Empire, is scarcely advancing in the direction of the flawless art of Greece. We shall be able to show how savage art, as of the Australians, develops into barbarous art, as of the New Zealanders; while the arts of strange civilisations like those of Peru and Mexico advance one step further; and how, again, in the early art of Greece, in the Greek art of ages prior to Pericles, there are remains of barbaric forms which are gradually softened into beauty. But

<sup>1</sup> The illustrations in this article are for the most part copied, by permission of Messrs. Cassell & Co., from the *Magazine of Art*, in which the Essay appeared.

Unhappily, this immunity from error accompanies an infertility of knowledge. It cannot serve as guidance, for it leads nowhither. Its security is imperilled by the first step in advance; for no sooner is one thing affirmed of another than, with this commencement of knowledge, fallibility of judgment commences; what is affirmed may be erroneously affirmed; the door has been opened, and error may creep in stealthily, or stalk in imperiously. Our only resource is vigilance: we challenge every object that presents itself, no matter how insignificant its aspect, and force it to declare its quality. This vigilance is Verification, or the ascertainment that every object *is* what it declares itself to be. The famous *principium identitatis* is not indeed a *guide*, but it is a *test*.<sup>1</sup> Hegel, denying that it is a law of thought (allowing it only as "a law of the abstract understanding"), affirms that "no man thinks or speaks according to this law; to say that a planet is a planet and magnetism is magnetism every one holds to be frivolous."<sup>2</sup> Perhaps so; and Locke styled such propositions "frivolous";<sup>3</sup> nevertheless, the whole stress of Verification consists in reducing propositions to identity or equivalence.

Error arises with Inference, being indeed nothing but the misstatement of the correspondence between what is inferred and what exists. Only two ways of correcting this misstatement are open; and I formerly called them respectively the Real Test and the Ideal Test. The first is a reduction of the inference to a

sensation (§ 15). The second is a reduction of the inference to a necessity of thought. Both are reductions to identical or equivalent propositions, which render their negatives unthinkable. The certainty of feeling *as* feeling cannot be disturbed. It is limpid evidence. If I feel cold, I may indeed err as to the external cause of my feeling, but not as to the feeling itself. The markings of a thermometer may assure me that the temperature of my body during ague-fit is higher than usual; but feeling is its own thermometer, and I am not mistaken in reading its indications when I simply say I *feel* colder, not hotter.

§ 32. This may seem somewhat trite; but if we follow the clue, it will lead us to large issues, one of them being the principle that the infallibility of Consciousness in each instance is the impossibility of a negative being thought. No one denies that an identical proposition is irresistible. Even Hegel, who, among other feats of logical legerdemain, showed that "Every A is at the same time not A," did not deny that A was A, whatever else it might be.

Identical propositions are frivolous when offered as enlargements of knowledge, but not when appealed to as tests of certainty. Condillac, who makes all reasoning consist in a translation of identical propositions, distinguishes between those which are frivolous because their identity is that of terms, and those which are serious because their identity is that of ideas. Thus, to say "six is six" teaches nothing, being only an iteration of the term; but to say "three added to three yield six" enlarges knowledge, by disclosing the same ideas under diversity of terms. "When we judge two men to be of equal size, we see one thing in the two things we compare—that

<sup>1</sup> Es ist ein Prinzip des fixirenden Verstandes, nicht der erzeugenden Anschauung; der festen Ruhe, nicht der flüssigen Bewegung." Trendelenburg: *Logische Untersuchungen*, 1862, ii. 155.

<sup>2</sup> Hegel: *Encyclopädie*, § 115.

<sup>3</sup> Comp. Mansel: *Prolegomena Logica*, p. 191.

there are necessarily breaks and solutions of continuity in the path of progress.

One of the oldest problems has already risen before us in connection with the question stated: Is art the gratification of the imitative faculty? Now, among the lowest, the most untutored, the worst equipped savages of contemporary races, art is rather decorative on the whole than imitative. The patterns on Australian shields and clubs, the scars which they raise on their own flesh by way of tattooing, are not recognisable imitations of any objects in nature. The Australians, like the Red Indians, like many African and some aboriginal Indian races, Peruvians, and others, distinguish their families by the names of various plants and animals, from which each family boasts its descent. Thus you have a family called Kangaroos, descended, as they fancy, from the kangaroo; another from the cockatoo, another from the black snake, and so forth. Now, in many quarters of the globe, this custom and this superstition, combined with the imitative faculty in man, has produced a form of art representing the objects from which the families claim descent. This art is a sort of rude heraldry—probably the origin of heraldry. Thus, if a Red Indian—say a Delaware—is of the family of the Turtle, he blazons a turtle on his shield or coat, probably tattoos or paints his breast with a figure of a turtle; and always has a turtle, *reversed*, designed on the pillar above his grave when he dies, just as, in our mediæval chronicles, the leopards of an English king are reversed on his scutcheon opposite the record of his death. But the Australians, to the best of my knowledge, though they are much governed by belief in descent from animals, do not blazon recognisable objects on their flesh, nor on the trees near the place where the dead are buried. They have not arrived at this pitch of imitative art, though they have invented or inherited a kind of runes which they notch

on sticks, and in which they convey to each other secret messages. The natives of the Upper Darling, however, do carve their family crests on their shields. In place of using imitative art, the Murri are said—I am not quite sure with what truth—to indicate the distinction of families by arrangements of patterns, lines, and dots tattooed on the breast and arms, and carved on the bark of trees near places of burial. In any case, the absence of the rude imitative art of heraldry among a race which possesses all the social conditions that produce this art is a fact worth noticing, and itself proves that the native art of one of the most backward races we know is not essentially imitative.

Anyone who will look through a collection of Australian weapons and utensils will be brought to this conclusion. The shields and the clubs are elaborately

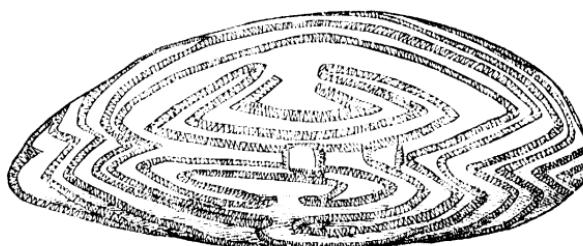


FIG. 1.—An Australian Shield.

worked, but almost always without any representation of plants, animals, or the human figure. As a rule, the decorations take the simple shape of the "herring-bone" pattern, or such other patterns as can be produced without the aid of spirals, or curves, or circles. There is a natural and necessary cause of this choice of decoration. The Australians, working on hard wood, with tools made of flint, or broken glass, or sharp shell, cannot easily produce any curved lines. Everyone who, when a boy, carved his name on the bark of a tree remembers the difficulty he had with S and G, while he got on easily with letters like M and A, which consist of straight or inclined

is to say, one size in two men, and we form an identical proposition."<sup>1</sup> It would be more correct to say that the identity here disclosed is that of *relation*; the ideas of three and three, and of six, and of man and man, are diverse, not identical: the terms "three and three" and "six" denote the same relations, connote different ideas. The relations are equivalent.

Our knowledge begins with the discernment of resemblances and differences: it ends in the establishment of *equations*, which are the resemblances abstracted from the differences, and raised into equivalents. At first sight no one would conclude that  $2 + 1$  was the same as  $4 - 1$ : terms and ideas are obviously different; but that an equality exists we easily disclose: thus  $2 + 1 = 3$ , and  $4 - 1 = 3$ , and the identity becomes visible in the final equation,  $3 = 3$ .<sup>2</sup> If I say "Man is Man," it is an identical but uninstructive proposition, having, however, irresistible certainty, because the negative is unthinkable. If I say "Man is an Animal," it is by an equation with abstraction of differences, which may possibly be erroneous and only acquires irresistible force when an equivalence in the terms Man and Animal is disclosed. That if a force of 7 will produce a velocity of 3, another force of 21 will produce a velocity of 9, is an identical proposition, although the identity has to be disclosed in an equation: we cannot say that the ideas of 7, 21, 3, and 9 are the same; but we say that the relation of 7 to 21 being  $\frac{1}{3}$ , and the relation of 3 to 9 being also  $\frac{1}{3}$ , then  $3 = 3 = A$  is  $A$ . It is in the unfolding of such identities—

the exhibition of uniform relations under different signs—that mathematics, and indeed all science, consists. Mr. Herbert Spencer has shown with masterly clearness how the establishment of relations of Likeness is the process of all reasoning—passing from Likeness to Identity, as it passes from qualitative to quantitative reasoning.<sup>3</sup> And the history of Science is the history of this process, tending towards that goal conceived by D'Alembert when he said, "L'univers, pour qui saurait l'embrasser d'un seul point de vue, ne serait, s'il est permis de le dire, qu'un fait unique et une grande vérité." We have already reached the sublime height of regarding all phenomena simply as modifications of each other, capable of being substituted for each other, being, indeed, only different expressions of equivalent *relations*, different signs of the same *quantities*. This is the grand doctrine of equivalents, which is illustrated in the convertibility of forces. It penetrates beneath the diversities of expression, and searches out the identities of nature.

The establishment of equations through abstraction of differences is the product of all reasoning. When the proposition  $A = B$  is first presented, it is by no means an identical one: the obvious diversities in the two terms allow me to infer that the resemblances are by no means so great as to amount to *equivalence*. I can therefore easily think the negative of this proposition. But after repeated demonstration of this equivalence ( $A$  being indifferently used for  $B$ , and  $B$  for  $A$ , without variation in the result), the resemblance is seen to be so complete that it amounts to identity, and then the negative is unthinkable. To

<sup>1</sup> Condillac: *Langue des Calculs*, p. 64. Compare also D'Alembert: *Discours Préliminaire*.

<sup>2</sup> Comp. Delbœuf: *Logique scientifique*, p. 127.

<sup>3</sup> Herbert Spencer: *Principles of Psychology*.

lines. The savage artist has the same difficulty with his rude tools in producing

anything like satisfactory curves or spirals. We engrave above (Fig. 1) a shield on which an Australian has succeeded, with obvious difficulty, in producing concentric ovals of irregular shape. It may be that the artist would have produced perfect circles if he could. His

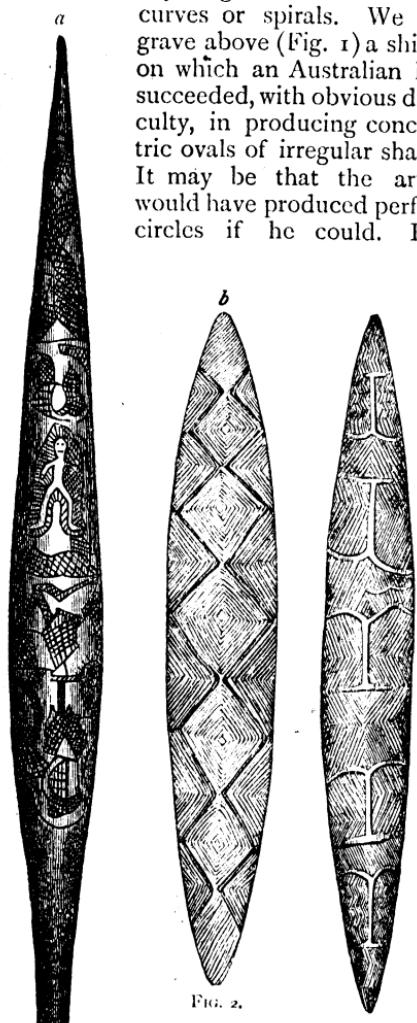


FIG. 2.

failure is exactly like that of a youthful carver of inscriptions coming to grief over his G's and S's. Here, however (Fig. 2), we have three shields, which, like the ancient Celtic pipkin (the tallest of the three figures in Fig. 3), show the earliest known form of savage

decorative art—the forms which survive under the names of "chevron" and "herring-bone." These can be scratched on clay with the nails, or a sharp stick; and this primeval way of decorating pottery made without the wheel survives, with other relics of savage art, in the western isles of Scotland. The Australian had not even learned to make rude clay pipkins, but he decorated his shields as the old Celts and modern old Scotch women decorated their clay pots, with the herring-bone arrangement of incised lines. In the matter of colour the Australians prefer white clay and red ochre, which they rub into the chinks in the woodwork of their shields. When they are determined on an ambush they paint themselves all over with white, justly conceiving that their sudden apparition in this guise will strike terror into the boldest hearts. But arrangements in black and white of this sort scarcely deserve the name of even rudimentary art.

The Australians sometimes introduce crude decorative attempts at designing the human figure, as in the pointed shield opposite (Fig. 2, a), which, with the other Australian designs, are from Mr. Brough Smyth's *Aborigines of Victoria*. But these ambitious efforts usually end in failure. Though the Australians chiefly confine themselves to decorative art, there are numbers of wall-paintings, so to speak, in the caves of the country which prove that they, like the Bushmen, could design the human figure in action when they pleased. Their usual preference for the employment of patterns appears to me to be the result of the nature of their materials. In modern art our mechanical advantages and facilities are so great that we are always carrying the method and manner of one art over the frontier of another. Our poetry aims at producing the effects of music; our prose at producing the effects of poetry. Our sculpture tries to vie with painting in the representation of action, or with lace-making in the production of reticulated surfaces, and so

*establish* identity under variety is the office of Investigation; to *exhibit* it is the office of Proof.

§ 33. It will doubtless have occurred to the reader that since Consciousness is the ultimate ground of appeal, and since Consciousness can never transcend its own sphere, we cannot possibly have a test of Objective Truth. In one sense this is correct. We never can know more than states of Consciousness; we cannot know Objects *per se*. But to reach the Truth we have no need for deeper knowledge, since Truth is simply *correspondence* between the internal and external order. That correspondence enables us to adjust our actions to external necessities; and we assure ourselves of its accuracy by the certainty of the adjustment. The touchstone of knowledge is *precision*. I shall shortly have to consider the nature of the proofs which assure us that the subjective order is similar to the objective order; but for the present it is enough to have shown that the subjective test of a Truth is the unthinkableness of its negative; in other words, the reduction to A is A.

If this disclosure startles and disposes the reader, the fault will lie with his exaggerated pretensions to infallible knowledge, which may be regarded as one of the disastrous errors of Philosophy. Instead of being contented with that degree of relative certainty which contents Science, and which permits *precision*, and the adjustments consequent on *precision*, Philosophy has been restless under the suggestion of doubt, and has required that its positions should not only be impregnable, but unassailable. There are many questions beyond the reach of demonstration. The existence of an external world, for instance, cannot be proved, if the highest degree of pro-

bability is rejected as insufficient. This has been declared a scandal to Philosophy; but the scandal lies in the demand for proof—the desire for better bread than can be made of wheat. We should interdict the question from being asked in terms that cannot be answered; it has no claim to be discussed, because the evidence on which it could be decided is not within the compass of human faculty. No astronomer would attend to the sceptic who should maintain that the law of gravitation was only an hypothesis, capable indeed of colligating the facts so that calculations accurately agreed with observation, and *precision* was equal to *vision*, yet nevertheless, *in itself*, the process formulated in the law might be very different. The astronomer would rebuke such purposeless doubt, and would reply that the hypothesis had the highest degree of probability and the highest scientific effectiveness, so long as it was the basis of exact calculation, and received the corroboration of Observation; let a new hypothesis be proposed which exceeds it in reach and in accuracy, and the old one will give way; and not till then. In like manner the hypothesis of an external world carries conviction, and will not be disturbed until proved unsuitable to our needs.

As there is always room for error wherever the proposition is not identical, and as probability of varying degrees is all that can be attained in the majority of our conclusions, it is easy to extend the logical principle which determines infallibility where error is impossible, to the varying degrees of probability where error is possible. That which is the logical justification of A is A—namely, the *impossibility* of thinking its negative—is also the justification of a proposition constructed out of complex

forth. But the savage, in his art, has sense enough to confine himself to the sort of work for which his materials are

and he confines himself to decorative scratches. Place the black in the large cave which Pundjel, the Australian Zeus,

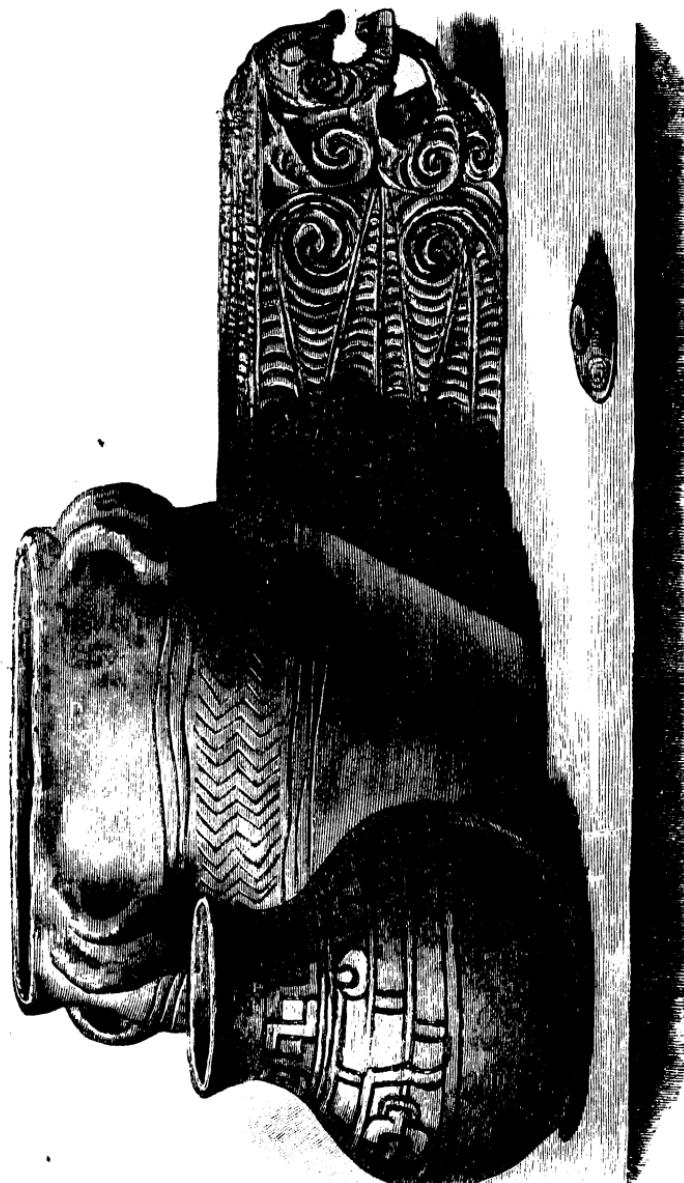


FIG. 3.—Savage Ornamentation.

fitted. Set him in the bush, with no implements and materials but a bit of broken shell and a lump of hard wood,

inhabited when on earth (as Zeus inhabited the cave in Crete), and give the black plenty of red and white ochre and

and remote inferences, which have therefore only more or less probability—*i.e.*, a *difficulty* in admitting its negative. For what is the meaning of probability? The harmony of a conclusion with other and better-established conclusions: the likeness in phenomena to other well-known phenomena. When this likeness is ascertained to be complete, when the analogy is proved to be an equivalence, then probability gives place to certainty.

§ 34. A formidable opponent must now be met, and his challenge answered, before we can venture to proceed to the second part of this inquiry. That opponent is Mr. Stuart Mill, who, both in his *Logic* and in his work on *Hamilton*, argues at great length against the unthinkableness of a negative as any test at all. He considers it a lingering remnant of Metaphysics; and in his work on *Comte* expresses his surprise at finding Mr. Herbert Spencer and myself in company on this point with metaphysicians. At which we also feel surprised. Mr. Spencer has replied to Mr. Mill in the *Fortnightly Review* (vol. i., pp. 521-550); in the sixth edition of his *Logic*, Mr. Mill has replied to the reply. I shall only touch upon such points as concern my present purpose. Throughout the discussion Mr. Mill seems to be attacking the supposition that inconceivability implies non-existence—that what is unthinkable cannot exist. But this does not touch us.

“Let the galled jade wince:  
Our withers are unwrung.”

If Mr. Spencer's language seems occasionally equivocal, the whole scope and spirit of his speculations sufficiently proclaim his restriction of knowledge to relative knowledge, and consequently of every test as relative. He has thus

forcibly stated his opinion: “Conceding the entire truth of the position that, during any phase of human progress, the ability or inability to form a specific conception wholly depends on the experience men have had; and that, by a widening of their experiences, they may, by-and-by, be enabled to conceive things before inconceivable to them; it may still be argued that, as at any time the best warrant men can have for a belief is the perfect agreement of all pre-existing experience in support of it, it follows that at any time the inconceivableness of its negation is the deepest test any belief admits of. Objective facts are ever impressing themselves upon us; our experience is a register of these objective facts; and the inconceivableness of a thing implies that it is wholly at variance with the register. Even were this all, it is not clear how, if every truth is primarily inductive, any better test of truth could exist. But it must be remembered that while many of these facts impressing themselves upon us are occasional; while others, again, are very general; some are universal, and are unchanging. These universal and unchanging facts are, by the hypothesis, certain to establish beliefs of which the negations are inconceivable; while the others are not certain to do this; and if they do, subsequent fact will reverse their action. Hence if, after an immense accumulation of experiences, there remain beliefs of which the negations are still inconceivable, most, if not all, of them must correspond to universal objective facts.”

On this Mr. Mill remarks: “If our incapacity to conceive the negation of a given supposition is proof of its truth, because proving that our experience has hitherto been uniform in its favour, the real evidence for the supposition is not

charcoal, and he will paint the human figure in action on the rocky walls. Later we will return to the cave-paintings of the Australians and the Bushmen in South Africa. At present we must trace purely decorative art a little further. But we must remember that there was once a race apparently in much the same social condition as the Australians, but far more advanced and ingenious in art. The earliest men of

the European Continent, about whom we know much — the men whose bones and whose weapons are found beneath the gravel-drift, the men who were contemporary with the rhinoceros, mammoth, and cave-bear — were not further advanced in material civilisation than the **Australians**. They used weapons of bone, of unpolished stone, and probably of hard wood. But the remnants of their art, the scraps of mammoth or reindeer bone in our museums, prove that they had a most spirited

style of sketching from the life. In a collection of drawings on bone (probably designed with a flint or a shell), drawings by palaeolithic man, in the British Museum, I have only observed one purely decorative attempt. Even in this the decoration resembles an effort to use the outlines of foliage for ornamental purposes. In almost all the other cases the palaeolithic artist has not decorated his bits of bone in the usual savage manner, but has treated his bone as an artist treats his sketch-book, and has scratched outlines of beasts and fishes with his sharp shell as an artist uses his point. These ancient bones, in short, are the sketch-books of European savages, whose untaught skill was far greater than that of the Australians, or even of the Eskimo. When brought into contact with Europeans, the Australian and Eskimo very quickly, even without regular teaching, learn to draw with some spirit and skill. In the Australian stele, or grave-pillar, which we have engraved (Fig. 4), the shapeless figures below the men and animals are the dead, and the *boilyas* or ghosts. Observe the patterns in the interstices. The artist had lived with Europeans. In their original conditions, however, the **Australians** have not attained to such free, artist-like, and unhampered use of their rude materials as the mysterious European artists who drew the mammoth that walked abroad among them.

We have engraved one solitary Australian attempt at drawing curved lines. The New Zealanders, a race far more highly endowed, and, when Europeans arrived among them, already far more civilised than the Australians, had, like the Australians, no metal implements. But their stone weapons were harder and keener, and with these they engraved the various spirals and coils on hard wood, of which we give examples here. It is sometimes said that New Zealand culture and art have filtered from some Asiatic source, and that in the coils and spirals designed, as in our engravings, on the face of the Maori chief, or on his wooden furniture, there may be found debased Asiatic influences.<sup>1</sup> This is one of the questions which we can hardly deal with here.



FIG. 4.—An Australian Stele.

style of sketching from the life. In a collection of drawings on bone (probably designed with a flint or a shell), drawings by palaeolithic man, in the British Museum, I have only observed one purely decorative attempt. Even in this the decoration resembles an effort to use the outlines

<sup>1</sup> Part of the pattern (Fig. 5, b) recurs on the New Zealand Bull-roarer, engraved in the Essay on the Bull-roarer.

the inconceivableness, but the uniformity of experience. Now this, which is the substantial and only proof, is directly accessible. We are not obliged to assume it from an incidental consequence. If all past experience is in favour of a belief, let this be stated and the belief openly rested on that ground; after which the question arises, what that fact may be worth as evidence of its truth?"

§ 35. The first remark needful to be made on this controversy is that, since we all three are thoroughly agreed in maintaining Experience, and Experience only, to be the ground of knowledge, and the Test of Truth to be necessarily an expression of that Experience, there can be little real opposition between us, in spite of some differences in language. Mr. Mill says that the evidence for a proposition is the uniformity of Experience; we say the same, and add that, inasmuch as this uniformity renders the negative unthinkable, it is this unthinkableness of the negative which becomes the Test of Truth. No validity is gained in adducing uniformity of Experience, unless there is a warrant that the experiences which are uniform are themselves beyond question; and this warrant is the unthinkableness of their negation. That some ambiguity will attach itself to the phrase "unthinkable" must be admitted: ambiguities are not to be avoided; and they are even more plentiful if we adopt "uniformity of experience," for that often fails to express the fact. "A is A" does not rest on "uniformity," but on intuition. My belief in my feeling as feeling is as irresistible in one case as after a thousand repetitions. My belief that a body in motion will move for ever, and in a straight line, unless it be influenced by some other body, is a generalisation from Experience, the negative of which

is unthinkable as soon as the proposition is clearly apprehended; but it cannot without ambiguity be called an uniformity of Experience, inasmuch as experiences seem momently to contradict it, and this seeming contradiction is only reconciled by an *abstraction of the differences*. Moreover, the test of uniformity can never be irresistible, because a possible diversity is not excluded. The test of identity is irresistible, and excludes all possibility of reversal. A is A for evermore. Not only are there many occasions on which the "unthinkableness of the negative" is a less ambiguous phrase than "uniformity of Experience," but, inasmuch as there are two schools in Philosophy, holding different views respecting the origin of knowledge, one school affirming it to be co-extensive with Experience, the other school affirming it to have an additional source antecedent to and independent of Experience, a Test of Truth ought to find its place in both schools; and this place is found by our Test. So long as discussion is confined to concrete questions, "uniformity of Experience" is as good a test as any; but no sooner does discussion turn upon certain abstract questions—*e.g.*, of Force—than the test of the unthinkable negative resumes its superiority.

Every objection that can be alleged against "unthinkableness" may equally be alleged against "uniformity." That which is unthinkable may turn out to be thinkable, that which has been uniform experience may become diversified. The examples cited of beliefs once universal and now universally rejected are examples of mistaken reliance on uniformity, and of unthinkableness rashly concluded where no equivalence had been established, because the elements were not such as then admitted of an equation.

Perhaps its solution requires more of knowledge, anthropological and linguistic, than is at present within the reach of any student. Assuredly, the races of the

resemblance, to be accounted for by the development of a crude early idea, may be traced most easily in the early pottery of Greece. No one says that the Greeks borrowed from the civilised people of America. Only a few enthusiasts say that the civilised peoples of America, especially the Peruvians, are Aryan by race. Yet the remains of Peruvian palaces are often by no means dissimilar in style from the "Pelasic" and "Cyclopean" buildings of gigantic stones which remain on such ancient Hellenic sites as Argos and Mycenæ. The probability is that men living in similar social conditions, and using similar implements, have unconsciously and unintentionally arrived at like results.

Few people who are interested in the question can afford to visit Peru and Mycenæ and study the architecture for themselves. But anyone who is interested in the strange identity

earth have wandered far, and have been wonderfully intermixed, and have left the traces of their passage here and there on sculptured stones, and in the keeping of the ghosts that haunt ancient grave-steads. But when two pieces of artistic work, one civilised, one savage, resemble each other, it is always dangerous to suppose that the resemblance bears witness to relationship or contact between the races, or to influences imported by one from the other. New Zealand work may be Asiatic in origin, and debased by the effect of centuries of lower civilisation and ruder implements. Or Asiatic ornament may be a form of art improved out of ruder forms, like those to which the New Zealanders have already attained. One is sometimes almost tempted to regard the favourite Maori spiral as an imitation of the form, not unlike that of a bishop's crozier at the top, taken by the great native ferns. Examples of

of the human mind everywhere, and in the necessary forms of early art, can go to the British Museum and examine the American and early Greek pottery. Compare the Greek key pattern and the wave pattern on Greek and Mexican vases, and compare the bird faces, or human faces very like those of birds, with the similar faces on the clay pots which Dr. Schliemann dug up at Troy. The latter are engraved in his book on Troy. Compare the so-called "cuttle-fish" from a Peruvian jar with the same figure on the early

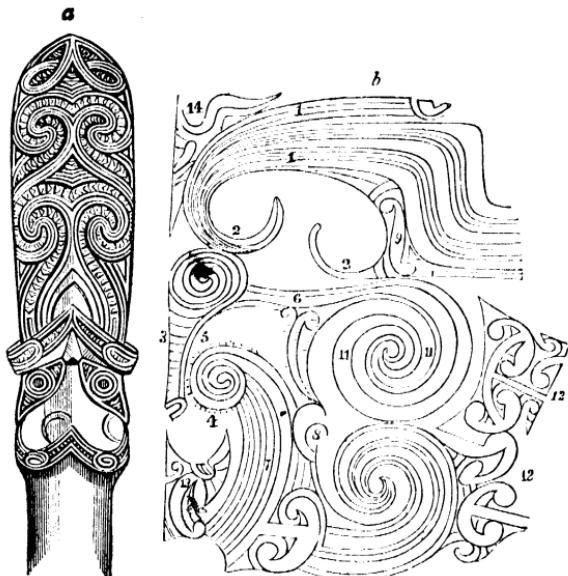


FIG. 5.—*a*, A Maori Design; *b*, Tattoo on a Maori's Face.



FIG. 6.—From a Maori's Face.

It is urged that men once believed the sun to move round the earth, and that, when they did so, "the contrary was inconceivable"; yet we now know that "inconceivable" to be true. I answer: When men affirmed that they saw the sun moving from east to west, and revolving round the earth, they affirmed a truth, a subjective, relative truth, indeed, but one which, being translateable into an identical proposition, was placed beyond the assaults of scepticism, and must survive all the changes of Science. What was that truth? It was that they saw the sun moving—*i.e.*, they had certain impressions from certain definite appearances, which followed in a definite order. The fact of their having these impressions was indisputable. How far the actual order corresponded with these impressions, how far their inferences were right or wrong, it was for Science to determine. It did so by proving that these inferences wanted the character of equivalence on which certainty reposes, and by showing that other inferences gave a more consistent explanation. The belief in the *appearance* of the sun's motion continues, and will for ever continue, for it is a truth the negation of which is unthinkable; but the belief in the *cause* of that appearance (which is only an inference) will vary as explanations vary: at each stage the only absolute ground of certainty is the reduction of every inference to *sensation* or to a necessity of thought; and where this ground cannot be reached, our only ground is *probability*, or such harmony of our explanation with established truths as compels conviction, and thus, for the time, renders the negative, if not unthinkable, yet so difficult of acceptance as to be almost equivalent to it. When asked why a man believes that two multiplied by three

gives six as the product, the answer is, Because he must: an alternative is impossible, the negative is unthinkable; he has discovered the equivalence of the relations. If asked why he believes that chemical combinations are uniformly dependent on vibratory calorific actions, the answer likewise will be, Because he must: the negative is unthinkable now that the equivalence of the relations has been exhibited to him. *Before* that exhibition he would have had no more difficulty in thinking the negative than he would have had in thinking the product of two multiplied by three was five before he had ascertained that the relations of multiplied numbers were not the relations of added numbers. The numerical identity is seen to be absolute, whereas the identity of heat and affinity may, in the present state of science, be considered as hypothetical. Nevertheless, in each case the 'Test' applies.

There are, notoriously, cases of inseparable association determined by the structure of our minds, such as no enlargement of experience could loosen, no subtler analysis dissolve, unless the structure of the mind itself were altered. There are also cases of association which are loosened by the recognition of a mistake in the supposition of identity. We supposed that the thunder was identical with the explosion of wrath, and we associated with it the idea of an angry deity, until the recognised identity of thunder and electricity severed the association. Finally, it is notorious that our experience, even when uniform, is narrow; so that, when a man affirms anything on the guarantee of its negative being unthinkable, we can disturb his confidence by showing that the negative is thinkable, and conformable with a wider experience.

Greek vases, most of which are to be found in the last of the classical vase-rooms upstairs. Once more, compare the little clay "whorls" of the Mexican and Peruvian room with those which Dr. Schliemann found so numerous at Hissarlik. The conviction becomes irresistible that all these objects—in shape, in purpose, in character of decoration—are the same, because the mind and the materials of men, in their early stages of civilisation especially, are the same everywhere. You might introduce old Greek bits of clay-work, figures or vases, into a Peruvian collection, or might foist Mexican objects among the clay treasures of Hissarlik, and the wisest archæologist would be deceived. The Greek fret pattern especially seems to be one of the earliest that men learnt

New Caledonia. The style of spirals and curves, again, once acquired (as it was by the New Zealanders), became the favourite of some races, especially of the Celtic. Anyone who will study either the ornaments of Mycenæ, or those of any old Scotch or Irish collection, will readily recognise in that art the development of a system of ornament like that of the Maoris. Classical Greece, on the other hand, followed more in the track of the ancient system of straight and slanted lines, and we do not find in the later Greek art that love of interlacing coils and spirals which is so remarkable among the Celts, and which is very manifest in the ornaments of the Mycenæan hoards—that is, perhaps, of the ancient Greek heroic age. The causes of these differences in the development of ornament, the causes that made Celtic genius follow one track, and pursue to its æsthetic limits one early *motif*, while classical art went on a severer line, it is, perhaps, impossible at present to ascertain. But it is plain enough that later art has done little more than develop ideas of ornament already familiar to untutored races.

It has been shown that the art which aims at decoration is better adapted to both the purposes and materials of savages than the art which aims at representation. As a rule, the materials of the lower savages are their own bodies (which they naturally desire to make beautiful for ever by tattooing), and the hard substances of which they fashion their tools and weapons. These hard substances, when worked on with cutting instruments of stone or shell, are most easily adorned with straight cut lines, and spirals are therefore found to be, on the whole, a comparatively late form of ornament.

We have now to discuss the efforts of the savage to represent. Here, again, we have to consider the purpose which animates him, and the materials which are at his service. His pictures have a practical purpose, and do not spring from what we are apt, perhaps too

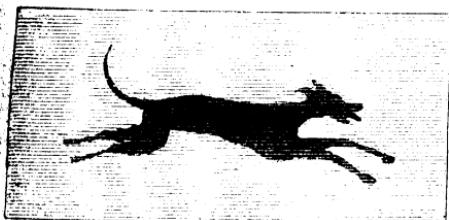


FIG. 7.—Bushman Dog.

to draw. The *svastika*, as it is called, the cross with lines at right angles to each limb, is found everywhere—in India, Greece, Scotland, Peru—as a natural bit of ornament. The allegorising fancy of the Indians gave it a mystic meaning, and the learned have built I know not what worlds of religious theories on this "pre-Christian cross," which is probably a piece of hasty decorative work, with no original mystic meaning at all.<sup>1</sup> Ornaments of this sort were transferred from wood or bone to clay, almost as soon as people learned that early art, the potter's, to which the Australians have not attained, though it was familiar to the not distant people of

<sup>1</sup> See Schliemann's *Troja*, wherein is much learning and fancy about the Aryan Svastika.

§ 36. Mr. Mill has noticed several of the inevitable ambiguities of language; yet he has not always succeeded in disentangling himself from them; as, for example, in his objection to Mr. Spencer's assertion that when he feels cold he cannot conceive himself not feeling cold. Mr. Mill replies by saying that he *can* conceive himself not feeling cold; and that he can imagine himself looking into darkness at the very moment that he is actually looking at the sun. The ambiguity of language here permits him to say this, although all that it lawfully expresses is that, while he looks at the sun, he can imagine himself (under *other* conditions) to be looking into darkness; just as it is possible for his thoughts to wander to Nova Zembla while he is sauntering down Regent Street. What Mr. Spencer meant to say was that, during the state of consciousness produced by his looking at the sun, it is impossible for the opposite state of consciousness to emerge; and this Mr. Mill has not answered, nor would he attempt to answer it.

§ 37. This digression ended, we may proceed to the second and more important part of the inquiry: the correspondence of the subjective and objective, as disclosed by our Test.

"Truth relatively to man cannot be defined as consisting in the conformity of knowledge with its object; for to man the object itself exists only as it is known by one faculty or another."<sup>1</sup> This is the old sceptical position, that the agreement can only be agreement of ideas. Kant adopts it by affirming that an universal *material* criterion is impossible, because the conception implies a contradiction;

but a *formal* criterion is possible, that being simply the agreement of ideas.<sup>1</sup>

These and other perplexing suggestions are set aside by our regarding Truth as the correspondence between the order of ideas and the order of things; whether ideas and things are or are not alike, it is enough if their *order* is alike. Here an equation can be established, and certainty found. Whether planets are moved by inhabiting spirits, or are whirled in a sling by some distant spirit, whether they are ellipsoid solids or unextended centres of force, whether they are in any respect like or unlike our conception of them, is of little consequence to us, so long as we have ascertained the *order* of the phenomena, the law of their motions. So absolute is this abstraction of differences, that we may admit the real law to be different from the law we conceive, provided only that there is equivalence—*i.e.*, that they numerically correspond, so as to admit of calculations which agree with observation. Hence all that Science needs is correct formulas of the *order* of phenomena: these are truths. How these formulas are reached we have not to consider here; when reached, they are placed by the Test beyond the conflict with doubt.

§ 38. It thus appears that the question which has been debated since the beginning of Philosophy may now receive a decisive answer. This was impossible hitherto, because of the *terms* in which the question was put. We must no longer seek Truth in the conformity of ideas with objects (which is impossible), nor in the agreement of ideas with ideas (which is a purely subjective condition, carrying no objective validity); we must seek it in the equation of the internal

<sup>1</sup> Mansel: *Prolegomena Logica*, p. 241.

<sup>1</sup> Kant: *Logik*. Einleitung, vii.

hastily, to consider the innate love of imitation for its own sake. In modern art, in modern times, no doubt the desire to imitate nature, by painting or sculpture, has become almost an innate impulse, an inborn instinct. But there must be some "reason why" for this; and it does not seem at all unlikely that we inherit the love, the disinterested love, of imitative art from very remote ancestors, whose habits of imitation had a direct, interested, and practical purpose. The member of Parliament who mimics the crowing of a cock during debate, or the street boy who beguiles his leisure by barking like a dog, has a disinterested pleasure in the exercise of his skill; but advanced thinkers seem pretty well agreed that the first men who imitated the voices of dogs, and cocks, and other animals, did not do so merely for fun, but with the practical purpose of indicating to their companions the approach of these creatures. Such were the rude beginnings of human language; and, whether that theory be correct or not, there are certainly practical reasons which impel the savage to attempt imitative art. I doubt if there are many savage races which do not use representative art for the purposes of writing—that is, to communicate information to persons whom they cannot reach by the voice, and to assist the memory, which, in a savage, is perhaps not very strong. To take examples. A savage man meets a savage maid. She does not speak his language, nor he hers. How are they to know whether, according to the marriage laws of their race, they are lawful mates for each other? This important question is settled by an inspection of their tattooed marks. If a Thlinkeet man of the Swan stock meets an Iroquois maid of the Swan stock, they cannot speak to each other, and the "gesture-language" is cumbrous. But if both are tattooed with the swan, then the man knows that this daughter of the swan is not for him. He could no more marry her than Helen of Troy could have married Castor, the tamer of

horses. Both are children of the Swan, as were Helen and Castor, and must regard each other as brother and sister. The case of the Thlinkeet man and the Iroquois maid is extremely unlikely to occur; but I give it as an example of the practical use, among savages, of representative art.

Among the uses of art for conveying intelligence we notice that even the Australians have what the Greeks would call the *σκυτάλη*, a staff on which inscriptions, legible to the Aborigines, are engraved. I believe, however, that the Australian *σκυτάλη* is not usually marked with picture-writing, but with notches—even more difficult to decipher. As an example of Red Indian picture-writing we publish a scroll from Kohl's book on the natives of North America. This rude work of art, though the reader may think little of it, is really a document as important in its way as the Chaldaean clay tablets inscribed with the record of the Deluge. The coarsely-drawn figures recall, to the artist's mind, much of the myth of Manabozho, the Prometheus and the Deucalion, the Cain and the Noah, of the dwellers by the great lake. Manabozho was a great chief, who had two wives that quarrelled. The two stumpy half-figures (4) represent the wives; the mound between them is the displeasure of Manabozho. Further on (5) you see him caught up between two trees—an unpleasant fix, from which the wolves and squirrels refused to extricate him. The kind of pyramid with a figure at top (8) is a mountain, on which, when the flood came, Manabozho placed his grandmother to be out of the water's way. The somewhat similar object is Manabozho himself, on the top of his mountain. The animals you next behold (10) were sent out by Manabozho to ascertain how the deluge was faring, and to carry messages to his grandmother. This scroll was drawn, probably on birch bark, by a Red Man of literary attainments, who gave it to Kohl (in its lower right-hand corner [11] he has pictured the event), that he might never forget the

and external orders, abstracting all differences. And the proof of this equation is the corroboration of calculation. When we can employ a formula with absolute precision, using it as if it were identical with the order of things, and applying it to events which are to come, we are certain that this formula expresses equivalence and is a truth.

Subjective agreement is as perfect in hallucination as in perception, which M. Taine happily calls "une hallucination vraie."<sup>1</sup> How, then, are we ever to be certain that our formulas are true—that the order of our ideas is in correspondence with the order of things? What is the bridge over the gulf between the subject and object? Let us pause awhile to consider.

I am seated in my study, and, on raising my head from a book, see a man slowly pass out of the room, cross the lawn, and seat himself on the garden wall. This has been the order of my sensations. Considered subjectively, the truth is indisputable. It is an identical proposition to say that I saw what I saw, felt what I felt. But can I with equal certainty say that what I saw had a corresponding reality, that the objective order was the same as the subjective? Not so. As yet no proof exists. I may have had an hallucination. To prove that my subjective state had its correspondent objective, some corroboration is needed. My wife enters the room, and she also sees the man on the garden wall. This proves that I have not had an hallucination of vision; but it does not prove the reality of my inference. Her testimony is not final, because she may misinterpret the appearances, as I mis-

interpret them. A dog comes in, and seeing the figure on the wall, begins barking furiously. This shows that, although wife and dog may misinterpret the appearances, there is *some* external object. If I could touch it, the corroboration of one sense by another would be valuable; I can, at any rate, speak to it. I do so; and, asking the man what he does there, he replies by some insulting jest. My conviction becomes deepened with each corroborating fact; and when, finally, I order my servant to fetch a policeman, and the policeman comes, and carries off the struggling intruder, the impossibility of my thinking that the vision had not an objective reality is absolute. When all the senses converge, when all the evidences corroborate, we are forced to believe in the objective reality, unless we declare all existence to be a dream.

§ 39. Inasmuch as all knowledge is the expression of Experience, the truth of any proposition respecting things can only be tested by some term of Experience. The elements of Inference must be severally reduced to Feeling, or must be established by Reason. If I cannot reduce an Inference to Feeling, I can approach it through the Feeling of others; and their corroboration is the stronger in proportion as it concerns the objective nature of the thing inferred. I want no evidence of the fact that sugar is sweet to me; but if everyone everywhere declares sugar to be sweet, Reason tells me there must be some objective something corresponding with this sensation; and when I find that this something, which exists in various fruits and various substances, has in all these the same atomic elements, I have got hold of an equation between the internal and external orders.

§ 40. Mr. Mill insists that a necessity

<sup>1</sup> Taine: *Les Philosophes Français du XIX<sup>e</sup> siècle.* 1857.

story of the Manabozhian deluge. The Red Indians have always, as far as European knowledge goes, been in the habit of using this picture-writing for the purpose of retaining their legends, poems, and incantations. It is unnecessary to say that the picture-writing of Mexico

the artist who recorded the Manabozhian legend, when they please.

In addition to picture-writing, religion has fostered savage representative art. If a man worships a lizard or a bear, he finds it convenient to have an amulet or idol representing a bear or a lizard. If

one adores a lizard or a bear, one is likely to think that prayer and acts of worship addressed to an image of the animal will please the animal himself, and make him propitious. Thus the art of making little portable figures of various worshipful beings is fostered, and the craft of working in wood or ivory is born. As a rule, the savage is satisfied with excessively rude representations of his gods. Objects of this kind—rude hewn blocks of stone and wood—were the most sacred effigies of the gods in Greece, and were kept in the dimmest recesses of the temple. No Demeter wrought by the craft of Phidias would have appeared so holy to the Phigalians as the strange old figure of the goddess with the head of a mare. The earliest Greek sacred sculptures that remain are scarcely, if at all, more advanced in art than the idols of the naked Admiralty Islanders. But this is anticipating; in the meantime it may be said that among the sources of savage representative art are the need of something like writing, and ideas suggested by nascent religion.

The singular war-picture (Fig. 9) from a cave in South Africa, which we copy from the *Cape Monthly Magazine*, probably represents a magical ceremony. Bushmen are tempting a great water animal—a rhinoceros, or something of that sort—to run across the land, for the purpose of producing rain. The connection of ideas is scarcely apparent to civilised minds, but it is not more indistinct than the connection between carrying a bit of the rope with which a man has been hanged and success at cards—a common French superstition.



FIG. 8. --Red Indian Picture-writing: the Legend of Manabozho.

and the hieroglyphics of ancient Egypt are derived from the same savage processes. I must observe that the hasty indications of the figure used in picture-writing are by no means to be regarded as measures of the Red Men's skill in art. They can draw much better than

of Thought cannot be accepted as a necessity of Things. Perhaps not; perhaps it can. We are incompetent to decide. To decide it would be to have absolute knowledge. Let me ask, why should not a necessity of Thought be sometimes the expression of an equivalent necessity of Things, since it is the product of Experience, which is determined by objective conditions? And even if we grant that a subjective necessity can never carry with it an objective necessity, we must still say, This is what we are compelled to think, and this for us is Truth. Not that I "erect the incurable limitation of the human captive faculty into laws of the outward universe." Far from it. I simply erect them into "laws of the conceptions we form of the universe"; and wherever we find these conceptions so far corresponding with external laws that they enable us to foresee results, and modify phenomena with certainty, we may declare the equivalence of the law and the conception. In such a case the necessity of Thought is the expression of a necessity of Things. The laws of Number, Form, and Motion are necessities of things no less than of Thought, not perhaps existing objectively in the same forms as they exist subjectively, but having an equivalent order; and the proof is that we *discover* them in Things, we do not put them there.

§ 41. And this leads me to remark on Mr. Mill's criticism that I "set up acquired necessities of thought in the minds of one or two generations as evidence of real necessities in the universe." Undoubtedly, the laws of Number, Form, and Motion are *discoveries*, and whether these were early or late in being made nowise affects their truth. Because men, until within the last twenty

years, failed to see the equivalence of Heat and Motion, are we to conclude that this equivalence is not a necessity of things? Did not the order in Things proceed on this law (or on a corresponding law) during all the centuries in which men's conceptions of the order were very different? And now that men's conceptions have been readjusted, and they have detected the identity of Heat and Motion, has not the law become a necessity of Thought no less than of Things?

§ 42. What Mr. Mill justly condemns is the tendency to accept necessities of Thought as necessities of Things, *before they have been proved to be identical*. Against this tendency to assume that the order of ideas corresponds with the order in phenomena, and that what is logically valid will always be objectively valid, I have repeatedly protested in the course of my History; for, indeed, the whole body of Metaphysics is a result of that vicious tendency. Nevertheless, believing that Truth is possible—according to the definition I have given of it—and that a correspondence between the internal and external orders, though difficult of attainment, has a decisive Test, I have shown that a proposition is *absolutely true* only when its terms are equivalent, and that as this rests on the impossibility of our thinking a negative of the proposition, the varying degrees of *probability* will depend on the possibility of admitting a negative. This latter condition varies, of course, with the enlargements of knowledge; that negative which was easily thinkable at one epoch becoming unthinkable at another, and that which was unthinkable in the infancy of Science becoming not only thinkable, but irresistible in its maturity. That men should be able to stand at the antipodes was formerly quite unthinkable; they

The Bushman cave-pictures, like those of Australia, are painted in black, red, and white. Savages, like the Assyrians and the early Greeks, and like children, draw animals much better than the human figure. The Bushman dog in our little engraving (Fig. 7) is all alive—almost as full of life as the dog which accompanies the centaur Chiron, in that beautiful vase in the British Museum which represents the fostering of Achilles. The Bushman wall-paintings, like those of Australia, seem to prove that savage art is capable of considerable freedom, when supplied with fitting materials. Men seem to draw better when they have pigments and a flat surface of rock to work upon than when they are scratching on hard wood with a sharp edge of a broken shell. Though the thing has little to do with art, it may be worth mentioning, as a matter of curiosity, that the labyrinthine Australian caves are decorated, here and there, with the mark of a red hand. The same mysterious, or at least unexplained, red hand is impressed on the walls of the ruined palaces and temples of Yucatan—the work of a vanished people.

There is one singular fact in the history of savage art which reminds us that savages, like civilised men, have various degrees of culture and various artistic capacities. The oldest inhabitants of Europe, who have left any traces of their lives and handiwork, must have been savages. Their tools and weapons were not even formed of polished stone, but of rough-hewn flint. The people who used tools of this sort must necessarily have enjoyed but a scanty mechanical equipment, and the life they lived in caves, from which they had to drive the cave-bear, and among snows, where

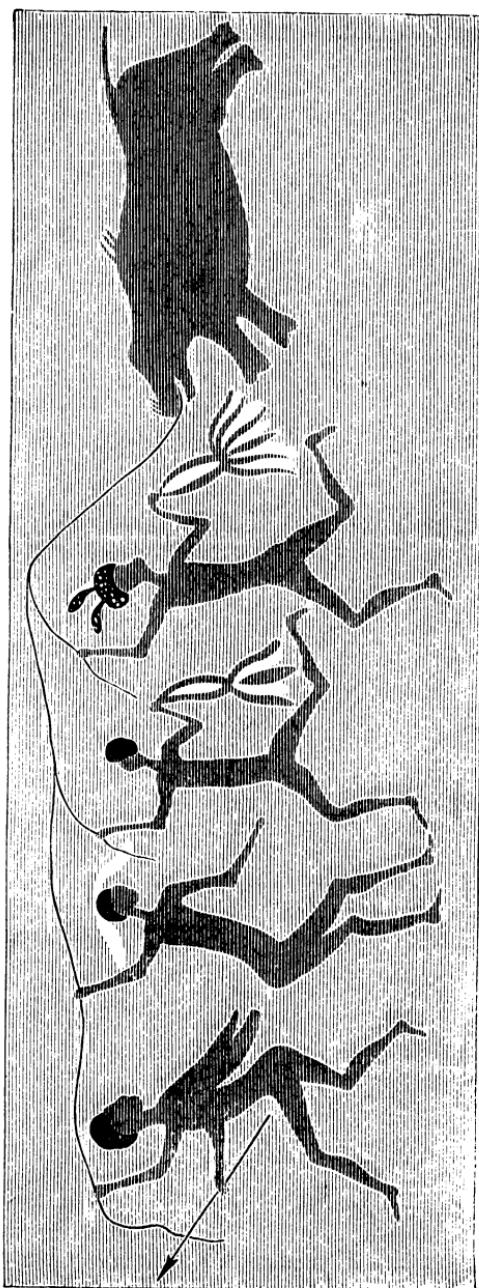


FIG. 9.—Bushman Wall-painting.

were conceived under conditions which would necessitate their falling away into space. Science has not disproved *this* necessity, but has displaced the erroneous conception of the facts on which the proposition rested, and replaced it by another proposition. (Compare § 67.) If we now conclude that men will stand as well on the earth at the antipodes as they stand beside us, it is because we believe the conditions to be equivalent in both places, and with equivalent conditions necessarily arise identical results.

§ 43. No one supposes that it will guarantee a truth to say simply that we are compelled to believe it, without exhibiting our grounds of belief.<sup>1</sup> We must show the evidence to be irresistible, displaying our belief as a necessary conclusion, not a mere prejudice or tradition. In adducing our evidence, we have to establish a series of identical propositions; and it is precisely because

we cannot do this in complex questions that demonstration halts.

§ 44. We shall have to resume the subject of necessity in a future section, when discussing Necessary Truths in relation to the origin of Knowledge; for the present, therefore, the argument may close. What the preceding paragraphs have attempted to establish is the possibility of Truth and its Test. This Test is absolute and relative: absolute, when the negative of a proposition is unthinkable because the proposition itself is an identical one; relative, when the negative, though not positively unthinkable, is nevertheless so opposed to existing knowledge as to be inadmissible, in which case the Test only reveals a high degree of probability. But in no case is the Test a means of enlarging knowledge; it only determines the degree of certainty. How knowledge is enlarged we have already seen in the exposition of Method.

#### IV.—SOME INFIRMITIES OF THOUGHT

§ 45. If History is Philosophy teaching by example, the examples of infirmity disclosed in the various systems which have gained acceptance should be care-

fully analysed. I do not propose to enumerate them here, nor to write a treatise on Error, but a few instructive examples may be specified.

<sup>1</sup> Kant properly objects, that the proposition "what we cannot but think as true must be true" is no ground of proof, but only a confession of inability. "Nun giebt es freilich wohl viele unerweisliche Erkenntnisse, allein das Gefühl der Ueberzeugung in Ansehung derselben ist ein Geständniss, aber nicht ein Beweisgrund davon, dass sie wahr sind." *Unters. über die Deutlichkeit der Grundsätze*. Werke, i. 89, ed. Hartenstein, 1838. (This is the edition I usually refer to.)

And first of that tendency, already noticed, § 16, to commute the formal into material elements, to raise Relations out of their proper category, and transport them into the category of Things. This is the parent of Metaphysics. It is often called the tendency to "realise abstractions." Having combined certain elements of particular experiences into a single conception, we treat the concept

they stalked the reindeer and the mammoth, must have been very rough. These earliest-known Europeans, "palæolithic men," as they are called, from their use of the ancient unpolished stone weapons, appear to have inhabited the countries

of the polishers of stone weapons, the arrival of men using weapons of bronze, the time which sufficed to change the climate and fauna and flora of Western Europe, lie between us and the palæolithic man. Yet in him we must recognise a skill more akin to the spirit of modern art than is found in any other savage race. Palæolithic man, like other savages, decorated his weapons; but, as I have already said, he did not usually decorate them in the common savage manner with ornamental patterns. He scratched on bits of bone spirited representations of all the animals whose remains are found mixed with his own. He designed the large-headed horse of



FIG. 10.—Palæolithic Art.

now known as France and England, before the great Age of Ice. This makes their date one of incalculable antiquity; they are removed from us by a "dark backward and abysm of time." The whole Age of Ice, the dateless period

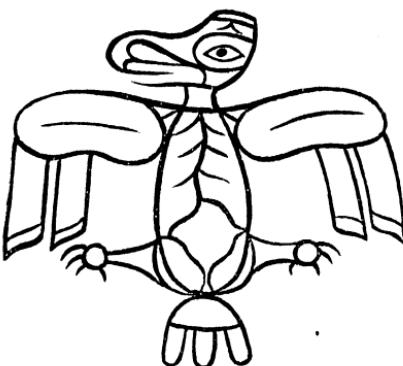


FIG. 11.—Red Indian Art : The Thunder-bird.

that period, and science inclines to believe that he drew the breed correctly. His sketches of the mammoth, the reindeer, the bear, and of many fishes, may be seen in the British Museum, or engraved in such works as Professor Boyd Dawkins's *Early Man in Britain*. The object from which our next illustration (Fig. 12) was engraved represents a deer, and was a knife-handle. Eyes at all trained in art can readily observe the wonderful spirit and freedom of these ancient sketches. They are the rapid characteristic work of true artists, who know instinctively what to select and what to sacrifice.

Some learned men, Mr. Boyd Dawkins among them, believe that the Eskimo,

as if it were an individual object.<sup>1</sup> The belief in Universals, which was accepted for centuries, is a well-known example. Professor Bain has truly remarked that “the more we analyse or decompose concrete objects into the abstract qualities that make them up, the more difficult it is to remount to the concrete. Hence the most arduous attempt of all is to make actual nature rise up out of scientific or technical language—to conceive minerals from a book of mineralogy, and the parts of the human body from anatomical description.”<sup>2</sup> Why this difficulty? Because we have to undo what has been laboriously done—to immerse the abstractions in the concretes from which they were abstracted. And yet “this process of resolving natural aggregates into their ultimate abstractions” is the great instrument of Philosophy. These abstracts represent the *constants*; whereas the concretes are the *variables*; and these variables, by their multiplicity and change, confuse the eye and distract the attention. But if, as our infirmity tends, we give objective independence to these abstracts, we distort the order of Things; in other words, we follow the movements of Thought, instead of following the movements of Things.

Now, in Science, when pursued on the Objective Method, we are constantly

<sup>1</sup> “Toutes les fois que certains éléments d'une représentation sont distingués par une analyse, ou groupés systématiquement dans une synthèse, un tout se forme et se pose; rien de mieux; mais on ne s'arrête pas là; on entend que les relations, sous condition desquelles cette opération s'est faite, disparaissent comme l'échafaudage inutile d'une édifice achevée, et que le tout qu'on a constitué demeure à part, debout, comme de lui-même, en lui-même.”—Renouvier: *Essais de Critique Générale*, 1854, i. 9.

<sup>2</sup> Bain: *The Senses and the Intellect*, 2nd ed., 1864, p. 603.

made aware of this tendency, and are forced to correct it by our failures in reconciling calculation with observation; but in Ontology such correction is impossible; accordingly, it is in Metaphysics that we see the most frequent exhibitions of the infirmity.

§ 46. A good example of the tendency is the once popular but now gradually expiring doctrine of a Vital Principle.

Life is the connexus of the organic activities: a complex whole of various particular facts, abstracted from those particulars, and raised into objective reality. Each organ is composed of constituent tissues; each tissue has its constituent elements; each element, each tissue, has its specific properties; the activity of each organ is the sum of these properties; the organism is the connexus of the whole. Life is thus a concept formed out of particulars. And because the functional relation of each organ to the whole, as of each tissue to each organ, is necessarily dependent on the established connexus, both terms of the relation (parts and whole) being inseparable, some physiologists have argued that the connexus is prior to the organs, the whole *generating* the parts, instead of being a *generalisation* from the parts.

Thus, forgetting the simple teachings of experience that Life is the connexus of various phenomena—an abstract from the phenomena—men have realised the abstraction, declared the *resultant* to be a necessary *antecedent*, and have constructed an Entity out of a Relation. They speak of a Vital Principle anterior to, and independent of, all the organic activities—a Plastic Force, which mysteriously shapes the elements into tissues, the tissues into organs, the organs into an organism, and which, while thus

that stunted hunting and fishing race of the Western Arctic Circle, are descendants of the palæolithic sketchers, and retain their artistic qualities. Other inquirers, with Mr. Geikie and Dr. Wilson, do not believe in this pedigree of the Eskimo. I speak not with authority, but the submission of ignorance, and as one who has no right to an opinion about these deep matters of geology and ethnology. But to me Mr. Geikie's arguments appear distinctly the more convincing, and I cannot think it demonstrated that

with the graver of a true artist (Fig. 14). The design is like a hasty memorandum of Leech's. Then compare the stiff formality of the modern Eskimo drawing (Fig. 13). It is rather like a record, a piece of picture-writing, than a free sketch, a rapid representation of what is most characteristic in nature. Clearly, if the Eskimo come from palæolithic man, they are a degenerate race as far as art is concerned. Yet, as may be seen in Dr. Rink's books, the Eskimo show considerable skill when they have

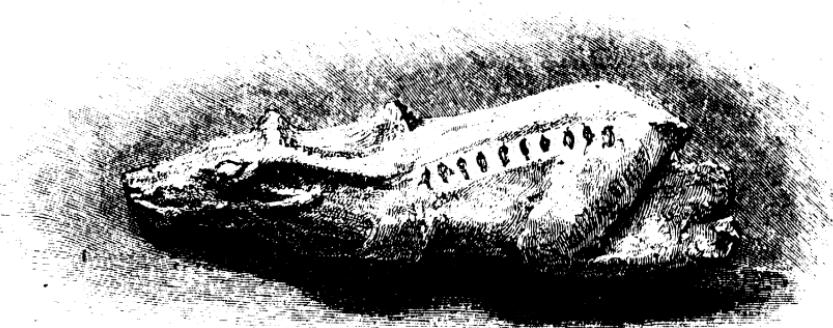


FIG. 12.—Palæolithic Art : A Knife-handle



FIG. 13.—Eskimo Drawing : A Reindeer Hunt.

the Eskimo are descended from our old palæolithic artists. Yet if Mr. Boyd Dawkins is right, if the Eskimo derive their lineage from the artists of the Dordogne, then the Eskimo are sadly degenerated. In Mr. Dawkins's *Early Man* is an Eskimo drawing of a reindeer hunt, and a palæolithic sketch of a reindeer; these (by permission of the author and Messrs. Macmillan) we reproduce. Look at the vigour and life of the ancient drawing—the feathering hair on the deer's breast, his head, his horns, the very glasses at his feet, are touched

become acquainted with European methods and models, and they have, at any rate, a greater natural gift for design than the Red Indians, of whose sacred art the Thunder-bird brooding over page 72 is a fair example. The Red Men believe in big birds which produce thunder. Quahteaht, the Adam of Vancouver's Island, married one, and this (Fig. 11) is she.

We have tried to show how savage decorative art supplied the first ideas of patterns which were developed in various ways by the decorative art of advancing

building up the parts, endows them with its own special property—vitality. "In the absence of this Principle," they argue, "all the activities which could be manifested within a tissue, or an organ, would be chemical and physical, not vital. The presence, therefore, of the Principle is presupposed in every atom of the vital organism; and this presence is not a resultant, but a cause."

§ 47. Erroneous as this hypothesis seems to most biologists at the present day, it has been strenuously supported, and even still finds eminent supporters. The main source of its persistence lies in the infirmity we are now considering. Because vital phenomena are only observed under a *special* conjunction of conditions, in which the forces (that are elsewhere observed acting in different directions) are seen to have a specific direction impressed on them, we form an abstract of this special conjunction, and then easily fall into the error of realising our abstraction, giving it objective independence. But let us remount to the source of our abstraction. Let us immerse the abstract once more in the concretes from which it was drawn. Let us follow the movements of phenomena, and the illusion will vanish.

A strip of muscle detached from the organism will manifest all its vital properties, so long as its specific constitution as muscle remains, so long as it resists disintegration; it will absorb oxygen, exhale carbonic acid, and contract under appropriate stimulus. A gland removed from the body continues to be a small laboratory of chemical change, secreting as it secreted in the organism. A nerve removed from the body continues to manifest its specific property of Neurility, and will cause a muscle to contract if stimulated; nay, a nerve-centre removed

from its connection with the rest of the body will continue to manifest its specific Sensibility; a decapitated bee will sting with its headless body, or bite with its bodiless head.

These phenomena prove that what each part does *in* the organism, each part does *out of* the organism. In other words, the Life of the animal is the sum of the particular vital activities; not a power anterior to, and independent of, these activities. What is Life, if it is not the sum of vital phenomena? And if it is the sum, it cannot be independent of the integers of which it is the sum. The abstract is of course different from any one of its concretes. The organism as a whole—a combination of activities—presents phenomena which cannot be presented by the parts separately. The animal which has its muscles, glands, nerves, and nerve-centres, all harmoniously working together in one body, in one connexus, is capable of manifesting complex phenomena which could not be manifested by any of its separated organs; and the only question that remains is, whether there may not be a Vital Principle which unites these parts into one harmonious whole? Let the question be distinctly stated: Do we mean by Life the *source* of all vital phenomena, or is it simply a personified expression of the phenomena? If the former, then

<sup>1</sup> "La force vitale peut être conçue comme une formule laconique destinée à exprimer en un seul mot les caractères propres à la matière organisée."—Béclard: *L'Physiologie*, p. 13. "La vida de la materia es una *funcion*: depende de sus elementos y cada uno de sus elementos depende de los demás y del todo que constituyen. ....El organismo entero es una *funcion* de funciones orgánicas, un conjunto que depende de sus partes, no pudiendo perder las todas, sin desaparecer como tal conjunto."—Nieto Serrano: *Boquejo de la Ciencia Viviente*, p. 337.

civilisation. The same progress might be detected in representative art. Books, like the guide-book to ancient Greece which Pausanias wrote before the glory had quite departed, prove that the Greek temples were museums in which the development of art might be clearly traced. Furthest back in the series of images of gods came things like that large stone which was given to Cronus when he wished to swallow his infant child Zeus, and which he afterwards vomited up with his living progeny. This fetich-stone was preserved at

gold-work. Greek temples have fallen, and the statues of the gods exist only in scattered fragments. But in the representative collection of casts belonging to the Cambridge Archaeological Museum one may trace the career of Greek art backwards from Phidias to the rude idol.

“Savage realism” is the result of a desire to represent an object as it is known to be, and not as it appears. Thus Catlin, among the Red Indians, found that the people refused to be drawn in profile. They knew they had

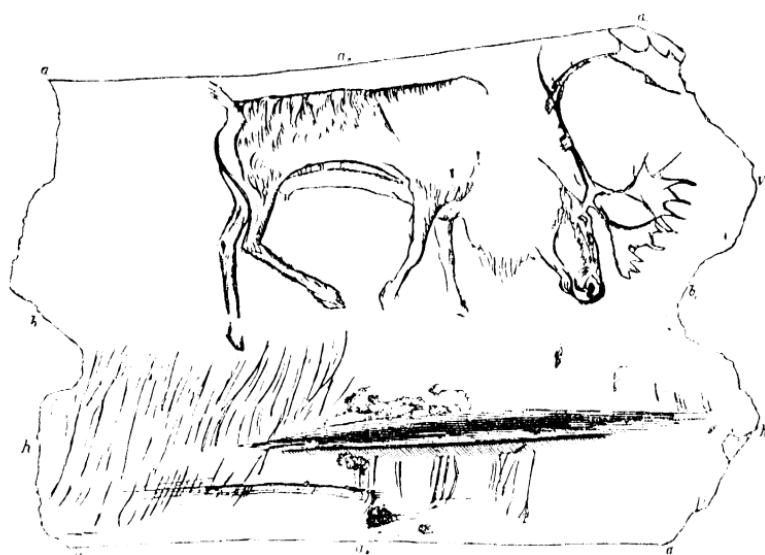


FIG. 14.—Palaeolithic Sketch: A Reindeer.

Delphi. Next came wild bulks of beast-headed gods, like the horse-headed Demeter of Phigalia, and it seems possible enough that there was an Artemis with the head of a she-bear. Gradually the bestial characteristics dropped, and there appeared such rude anthropomorphic images of Apollo—more like South Sea idols than the archer prince—as are now preserved in Athens. Next we have the stage of semi-savage realism, which is represented by the metopes of Selinus in Sicily, now in the British Museum, and by not a few gems and pieces of

two eyes, and in profile they seemed only to have one. Look at the Selinus marbles, and you will observe that figures, of which the body is seen in profile, have the full face turned to the spectator. Again, the savage knows that an animal has two sides; both, he thinks, should be represented, but he cannot foreshorten, and he finds the profile view easiest to draw. To satisfy his need of realism he draws a beast's head full-face, and gives to the one head two bodies drawn in profile. Examples of this are frequent in Minoan gems and

we mean that anterior to all vital phenomena there is a Principle, or Entity, which is in no wise dependent on these phenomena; and on this Principle all phenomena depend, as effects depend, upon their causes.

§ 48. Before considering this aspect of the old doctrine, there is one objection which must be anticipated. Seeing each part of the organism capable of manifesting vitality, the vitalists may claim that fact as peremptory evidence of the truth of their doctrine. "The parts are alive," they argue; "but how alive? They have been *endowed* with vitality by the Principle which forms the organism; not holding it from any *virtue* in themselves, but receiving it from the source of all organic activity. Indeed, the conclusive proof of the existence of a Vital Principle is the fact that every atom of the organism is interfused with life."

I will meet this argument by the simple question: Is the Vital Principle identical with, and co-extensive with, the Life manifested by the whole organism, or is it simply the Life manifested by each part? When we speak of a Vital Principle, do we mean the Life of the animal, and is that the same thing as the Life of an isolated muscle, gland, or nerve? Obviously not. In the one we group together various phenomena of sensibility, contractility, nutrition, reproduction, development, and decay. In the other we group together only certain special phenomena. The muscle will contract, will absorb oxygen and exhale carbonic acid; but it will not nourish itself, it will not grow, it will not reproduce other muscles, it will not feel, nor think. If we admit that there is a certain community in all parts of the organism, a community which expresses a fundamental identity, the parts being differen-

tiated from one common mass, we must nevertheless admit the great diversity in the various parts. The organism is the synthesis of these parts, and Life is the synthesis of their properties.

To make this position clearer, let us analyse our knowledge of a locomotive. We find that the fire will heat water out of the machine as in it; the water, when raised to a temperature of  $212^{\circ}$  F., will pass off into steam; the expansion of this steam will force a piston; the crank will turn a wheel; the wheel will roll a carriage. The skilful adjustment of these various parts results in a whole which we name a locomotive. But no one supposes that the phenomena presented by the locomotive could be presented by any one of its parts. Still less does any one suppose that the phenomena are due to a Locomotive Principle, independent of the parts, which created and adjusted the parts. The engine-maker who adjusted the parts did not give them their properties; he found them, and used them.

Now, the only point in which this parallelism is incomplete is in the community which runs through all the parts of the organism, and is not found in all parts of the machine. As I said before, this arises from the organism being constituted by differentiations of a substance originally homogeneous; whereas the machine is constructed of materials originally heterogeneous. The one was evolved; the other made. If, therefore, the Vital Principle be that which is common to all parts, we shall have to simplify our conception of Life, and reduce it to the properties of a blastema. Eliminating many of the great phenomena of organic activity, we are left with a structureless substance having the properties of Assimilation and Disintegration, from which Development, Reproduction,

gold work; and Mr. A. S. Murray suggests (as I understand him) that the attitude of the two famous lions which guarded vainly Agamemnon's gate at Mycenæ is derived from the archaic double-bodied and single-headed beast of savage realism. Very good examples of these oddities may be found in the *Journal of the Hellenic Society*, 1881, pl. xv. Here are double-bodied and single-headed birds, monsters, and sphinxes. We engrave (Fig. 15) three "Minoan" gems from the islands as examples of savagery in "Minoan" art. In the oblong gem the archers are rather below the Red Indian standard of design. The hunter figured in the first gem is almost up to the Bushman mark. In his dress ethnologists will recognise an arrangement now common among the natives of New Caledonia. In the third gem the woman between two swans may be Leda, or she may represent Leto in Delos. Observe the amazing rudeness

of the design, and note the modern waist and crinoline. That art, we know, could attain almost to the level of Greek



FIG. 15.—Archaic Greek Gems.

classical art, but the gem-cutters whose work is here represented were very poor artists.<sup>1</sup>

<sup>1</sup> For "Minoan" masterpieces see Schuchardt, "Schliemann's Excavations," in Arthur Evans's *Prehistoric Tombs of Knossus*, Mr. Burrows's *Discoveries in Crete*, and, for a popular account with excellent illustrations, Signor Mosso's *Palaces of Crete*.

## IX.

### SAVAGE SPIRITUALISM

PHILOSOPHERS among the Dénè Hareskins, in the extreme north of America, recognise four classes of "Shadow" or magic. Their categories apply sufficiently closely to all savage sorcery (excluding sympathetic magic), as far as it has been observed. We have, among the Hareskins:—

1. Beneficent magic, used for the healing of the sick.

2. Malevolent magic—the black art of witchcraft.

3. Conjuring, or the working of merely sportive miracles.

4. Magic for ascertaining the truth about the future or the distant present—clairvoyance. This is called "The Young Man Bound and Bounding," from the widely-spread habit of tying up the limbs of the medium, and from his customary convulsions.

To all of these forms of magic, of spiritualism, the presence and aid of "spirits" is believed to be necessary,

and Death result. Nor will even this simplification much assist the doctrine of a Vital Principle. Life is only known in dependence on substance; its activity is accelerated or retarded according to the conditions in which the chemical changes of the substance are facilitated or impeded, and it vanishes with the disintegration of the substance. What, therefore, remains but to conclude that Vitality is the abstract designation of certain *special* properties manifested by matter under certain *special* conditions? Thus conceived, the ascending complexity of vital phenomena with an ascending complexity of organic structure, in harmony with certain special conditions, becomes intelligible, and Vitality distinguishes the simplest living monad no less than the most complex animal organism. Community is thus reconciled with diversity.

§ 49. Metaphysical ghosts cannot be killed, because they cannot be touched; but they may be dispelled by dispelling the twilight in which shadows and solidities are easily confounded. The Vital Principle is an entity of this ghostly kind; and although the daylight has dissipated it, and positive Biology is no longer vexed with its visitations, it nevertheless re-appears in another shape in the shadowy region of mystery which surrounds biological and all other questions. I indicated this region of mystery when I said that the organism differed from all other mechanisms in being evolved from a homogeneous substance, and not made out of heterogeneous substances. How comes this possibility of evolution? Whence the adjustment of part to part and function to function? If the machine requires a mechanist to dispose and adjust the parts, does not the organism require its mechanist or Plastic Principle?

In presence of this question the metaphysicist, although he may have given up his belief in an Entity, a Life independent of living substances, has ready recourse to another form of the same belief, and substitutes for the Vital Principle the conception of a Plan or *Scheme*, according to which the physical forces are coerced into an organic unity. The same conception has been applied to the Cosmos. It may be here considered solely in reference to the organism, though students will have no difficulty in extending the argument.

§ 50. At the outset note a false analogy, arising from a misconception of Evolution. We see an architect arranging a plan for a house, and a builder arranging the materials in accordance with this plan. Finding in an organism a certain adjustment of parts, which may be reduced to a plan, we are easily led to conceive that this plan was made before the parts, and that the adjustment was determined by the plan. This is what logicians call *πρότερον πρότερον*, and ordinary men "putting the cart before the horse"; the resultant is transformed into the cause.

We not only see that the architect's plan determined the arrangement of materials in the house, but we see why it must have done so, because the materials have no spontaneous tendency to group themselves into houses; that not being a recognised property of bricks, mortar, wood, and glass. But what we know of organic materials is that they *have* this spontaneous tendency to arrange themselves in definite forms; precisely as we see chemical substances arranging themselves in definite forms, without the intervention of any extra-chemical agency.

Observe: either the Plan is independent

with, perhaps, the exception of the sporadic or conjuring class. A spirit helps to cure and helps to kill. The free spirit of the clairvoyant in bondage meets other spirits in its wanderings. Anthropologists, taking it for granted that "spirits" are a mere "animistic hypothesis"—their appearances being counterfeited by imposture—have paid little attention to the practical magic of savages, as far as it is not merely sympathetic and based on the doctrine that "like cures like."

Thus Mr. Sproat, in his excellent work, *Scenes and Studies of Savage Life*, frankly admits that in Vancouver Island the trickery and hocus-pocus of Aht sorcery were so repugnant to him that he could not occupy himself with the topic. Some other travellers have been more inquisitive; unlettered sojourners among the wilder peoples have shared their superstitions and consulted their oracles, while one or two of the old Jesuit missionaries were close and puzzled observers of their "mediumship."

Thus enough is known to show that savage spiritualism wonderfully resembles, even in minute details, that of modern mediums and *seances*, while both have the most striking parallels in the old classical thaumaturgy.

This uniformity, to a certain extent, is not surprising, for savage, classical, and modern spiritualism all repose on the primæval animistic hypothesis as their metaphysical foundation. The origin of this hypothesis—namely, that disembodied intelligences exist and are active—is explained by anthropologists as the result of early reasonings on life, death, sleep, dreams, trances, shadows, the phenomena of epilepsy, and the illusions of starvation. This scientific theory is, in itself, unimpeachable; normal phenomena, psychological and physical, might suggest most of the animistic beliefs.<sup>1</sup>

At the same time, "veridical hallucinations," if there are any, and clairvoy-

ance, if there is such a thing, would do much to originate and confirm the animistic opinions. Meanwhile, the extraordinary similarity of savage and classical spiritualistic rites, with the corresponding similarity of alleged modern phenomena, raises problems which it is more easy to state than to solve. For example, such occurrences as "rappings," as the movement of untouched objects, as the lights of the *seance* room, are all easily feigned. But that ignorant modern knaves should feign precisely the same raps, lights, and movements as the most remote and unsophisticated barbarians, and as the educated Platonists of the fourth century after Christ, and that many of the other phenomena should be identical in each case, is certainly noteworthy. This kind of folklore is the most persistent, the most apt to revive, and the most uniform. We have to decide between the theories of independent invention; of transmission, borrowing, and secular tradition; and of a substratum of actual fact.

Thus, either the rite of binding the sorcerer was invented, for no obvious reason, in a given place, and thence reached the Australian blacks, the Eskimo, the Dène Hareskins, the Davenport Brothers, and the Neo-Platonists, or it was independently evolved in each of several remote regions; or it was found to have some actual effect—what we cannot guess—on persons entranced. What the effect was supposed to be is not beyond the range of conjecture. Many savage and barbaric peoples bind up the limbs of the body about to be interred. Probably the purpose is to prevent the dead from "walking." To bind up a living man is to make him like the dead, and a sharer of their mystic lore. Thus, in Scotland, to make a man second-sighted, he was bound up with a hair-rope that had bound a corpse to the bier. After that he had second sight.<sup>1</sup> We are

<sup>1</sup> See Mr. Tylor's *Primitive Culture*, chap. xi., for the best statement of the theory.

<sup>1</sup> Kirk (ob. 1692), *Secret Commonwealth of Elves, Fauns, and Fairies*.

of the materials, in which case it is an extra-biological agency; or it is the generalised concept of the indwelling tendencies of matter, when under definite conditions. In the one case the analogy of the architectural Plan is correct; but this destroys the idea of *evolution*, and substitutes that of *construction*. In the other case the analogy is seen to be founded on a misconception of organic facts; the parts with their adjustments *evolve a plan*, and are not *constructed after a plan*. From an observed *nexus* men rashly infer a *nexus*, from an actual conjunction a previous intention. If this conception of a Plan be admitted in Biology, it must equally be admitted in Chemistry, Physics, and Astronomy. Matter and Force not being mysterious enough, we must add a new mystery of architectural Plan, shaping Matter and directing Force. There is, however, this dilemma: Is the Plan in itself a shaping Power? It is then only another name for the Universal Cause. Is it without specific power? It is then an impotent overseer.

§ 51. According to the first answer, the Plan is identified with God. But this introduction of God, besides its pantheistic issues, is an evasion of the real question. We did not ask whether God fashions all things, organisms as well as worlds; but whether each organism and each chemical species has over and above its constituent elements and properties a shaping Idea, an independent Plan, which gives specific direction to the constituent elements and properties? This is the question. There are two answers: 1st, *the teleological*. There must be such a Plan, because our examination of an organism discloses its resemblance to mechanisms which we know to have been constructed on a Plan, and we con-

clude that each adjustment was intended to effect its purpose. 2nd, *the psychological*. The conception of a Plan, when it does not arise from a false analogy (§ 50), is a generalised expression of the observed facts of organic independence: the facts of a *nexus*. Science finding it indispensable to co-ordinate all the facts in a general concept, such as a Plan, men are led by an infirmity of thought to realise the concept; and having first used it only as a convenient expression, they grow into a belief of this *nexus* being *also* a *nexus*.

§ 52. This argument will perhaps be met by the distinction of Potential and Actual, which has played so prominent a part in Metaphysics, and which is itself one of the products of the infirmity now under examination. It will be said "the Plan pre-exists, not as an actual objective fact, but as a Possibility, a Potentially."

Let us first see what experience tells us of the development of an organism. The ovum and the seed are starting-points from which an animal and a plant may, *under requisite conditions*, be developed. This is the expression of our experience. But now observe the jugglery of thought! One of the elements of the whole result, absolutely necessary to the result (indicated by italics in our statement), is quietly eliminated, and never afterwards restored. By a regressive movement of Thought we carry the developed organism back again to its starting-point (*minus* the conditions of development, therefore), and form a concept of the ovum and seed as *potentially* containing the animal and the plant.

At first this is mental shorthand, useful as an artifice. Unhappily it soon loses its position as an artifice, and passes into

hampered by not knowing, in our comparatively rational state of development, what strange things it is natural for a savage to invent. That spirits should knock and rap seems to us about as improbable an idea as could well occur to the fancy. Were we inventing a form for a spirit's manifestations to take, we never should invent *that*. But what a savage might think an appropriate invention we do not know. Meanwhile, we have the mediæval and later tales of rapping, some of which, to be frank, have never been satisfactorily accounted for on any theory. But, on the other hand, each of us might readily invent another common "manifestation"—the *wind* which is said to accompany the spirit.

The very word *spiritus* suggests air in motion, and the very idea of abnormal power suggests the trembling and shaking of the place wherein it is present. Yet, on the other side, the "cold non-natural wind" of *séances*, of Swedenborg, and of a hundred stories, old or new, is undeniably felt by some sceptical observers, even on occasions where no professional charlatan is engaged. I may cite my brother, the late T. W. Laing, of Balliol College, who played in the University and Gloucestershire Elevens in 1874 and 1875. He and other undergraduates, mostly "Blues," and sceptical enough, held *séances* in the rooms of the Oxford wicket-keeper. I need not describe the amazing things that occurred. "The noise was as great when all the men had gone out of college," said their host to me, "as when we were all in the room." The point is that, as my brother told me, "just before any very odd thing happened, I felt a very cold wind blowing over my hands." As to the trembling and shaking of the house or hut, where the spirit is alleged to be, we shall examine some curious evidence, ancient and modern, savage and civilised. So of the other phenomena. Some seem to be of easy natural invention, others not so; and, in the latter case,

independent evolution of an idea not obvious is a difficult hypothesis, while transmission from the Pole to Australia, though conceivable, is apt to give rise to doubt.

Meanwhile, one phenomenon, which is usually said to accompany others much more startling, may now be held to have won acceptance from science. This is what the Dène Hareskins call the *Sleep of the Shadow*—that is, the *Magical Sleep*, the hypnotic trance. Savages are well acquainted with this abnormal condition, and with means of producing it; and it is at the bottom of all their more mysterious, non-sympathetic magic. Before Mesmer, and even till within the last thirty years, this phenomenon, too, would have been scouted; now it is a commonplace of physiology. For such physical symptoms as introverted eyes in seers we need look no further than Martin's account of the second-sighted men, in his book on the Hebrides. The phenomenon of anaesthesia, insensibility to pain, in trance, is not unfamiliar to science; but that red-hot coals should not burn a seer or medium is, perhaps, less easily accepted; while science, naturally, does not recognise the clairvoyance, and still less the "spiritual" attendants, of the seer in the *Sleep of the Shadow*. Nevertheless, classical, modern, and savage spiritualists are agreed in reporting these last and most startling phenomena of the magic slumber in certain cases.

Beginning with what may be admitted as possible, we find that the Dène Hareskins practise a form of healing under hypnotic or mesmeric treatment. The physician (who is to be pitied) begins by a three days' fast. Then a "magic lodge," afterwards to be described, is built for him in the forest. Here he falls into the *Sleep of the Shadow*; the patient is then brought before him. In the lodge the patient confesses his sins to his doctor, and

\* Petitot, *Traditions Indiennes du Canada Nord-Ouest*, p. 434.

a fallacy. The elements which have been omitted are never restored (compare § 54). If we restore them, if we write out the full meaning of our shorthand notes, what do we read? Assuredly not that the lineaments of the animal are actually present in the ovum. In the ovum they do not exist. When you say that they exist *potentially*, what is the translation of your phrase? It is, that under a given history—under a successive series of particular conditions, a special result will ensue. If we know the conditions and their succession, we may foretell the result. The law of causation determines it. Any variation in any one of the conditions will be followed by a corresponding variation in the result. All this history of development is omitted in the shorthand of Thought. The result is foreseen, because, the conditions being taken for granted, their action is anticipated.

But nature must not be thus distorted and compressed. If our feeble faculties make artifices necessary, we must not forget that they are artifices; we must restore, in a final elaboration, what, in a "preliminary elaboration, we rejected. The facts of Nature remain whether we reject them or accept them. Potential existence is ideal, not real. If you adjust your rifle accurately, the animal aimed at may be *potentially* dead, but *is* alive; and the merest trifle, the swerving of your hand, or the dampness of your powder, puts an end to the potential existence. A fact is not a fact until it is accomplished. Nothing exists before it exists. This truism is disregarded by those who talk of potential existence. The conception of a plan preceding the execution of a work does not prove that the plan pre-exists *in re*. The realised plan does not begin to exist, out of

Thought, until the work is begun, and is completed with the completion of the work.

§ 52. Potential existence is subjective only. My forecasts of the results of a history may be true or false. I foresee the result by grouping together the facts which *will be* with the facts which *are*, and I make one concept of them. In doing so I annihilate history. I transcend the conditions of Time and the necessities of Causality, and conceive as simultaneously completed that which in Nature must be successive and graduated. So far well. But if I desire to ascertain the actual facts, I must follow the course of Nature, and restore that history which has been left out of sight. Following the development of the ovum, historically, I observe that not only are certain conditions indispensable, but that every variation in the requisite conditions produces a variation in the result—modifies the structure of the animal, arrests or accelerates its development. If I varnish the shell of an egg, I prevent the embryo from developing into a bird. If I varnish one part of the shell, I so alter the requisite conditions that the result is a bird incapable of living, or curiously malformed. In altering the history I have changed the historical result. What, then, has the Plan effected? The Plan has not come into existence. If the conjunction has thus altered with the altered conditions, how can it be the fulfilment of a Plan irrespective of conditions? and a Plan which is strictly dependent on conditions is not a nisus, but a nexus. The inevitable conclusion is that Plan neither shapes the Organism nor determines the conditions through which the development takes place. In mathematical phrase, the Plan is the *function* of Development and Developing

when that ghostly friend has heard all he sings and plays the tambour, invoking the spirit to descend on the sick man. The singing of barbarous songs was part of classical spiritualism; the Norse witch, in *The Saga of Eric the Red*, insisted on the song of Warlocks being chanted, which secured the attendance of "many powerful spirits"; and modern spiritualists enliven their dark and dismal programme by songs. Presently the Hareskin physician blows on the patient, and bids the malady quit him. He also makes "passes" over the invalid till he produces trance; the spirit is supposed to assist. Then the spirit extracts the *sin* which caused the suffering, and the illness is cured, after the patient has been awakened by a loud cry. In all this affair of confession one is inclined to surmise a mixture of Catholic practice, imitated from the missionaries. It is also not, perhaps, impossible that hypnotic treatment may occasionally have been of some real service.

Turning to British Guiana, where, as elsewhere, hysterical and epileptic people make the best mediums, or "Peay-men," we are fortunate in finding an educated observer who submitted to be *peated*. Mr. Im Thurn, in the interests of science, endured a savage form of cure for headache. The remedy was much worse than the disease. In a hammock in the dark, attended by a peay-man armed with several bunches of green boughs, Mr. Im Thurn lay, under a vow not to touch whatever might touch him. The peay-man kept howling questions to the *kenaimas*, or spirits, who answered. "It was a clever piece of ventriloquism and acting."

"Every now and then, through the mad din, there was a sound, at first low and indistinct, and then gathering in volume, as if some big, winged thing came from far towards the house, passed through the roof, and then settled heavily on the floor; and again, after an interval, as if the same winged thing rose and passed away as it had come," while the air was sensibly stirred. A noise of

lapping up some tobacco-water set out for the *kenaimas* was also audible. The rustling of wings, and the thud, "were imitated, as I afterwards found, by skilfully shaking the leafy boughs, and then dashing them suddenly against the ground." Mr. Im Thurn bit one of the boughs which came close to his face, and caught leaves in his teeth. As a rule, he lay in a condition scarcely conscious: "It seemed to me that my spirit was as nearly separated from my body as is possible in any circumstances short of death. Thus it appears that the efforts of the peay-man were directed partly to the separation of his own spirit from his body, and partly to the separation of the spirit from the body of his patient, and that in this way spirit holds communion with spirit." But Mr. Im Thurn's headache was not alleviated! The whirring noise occurs in the case of the Cock Lane Ghost (1762), in Iamblichus, in some "haunted houses," and is reported by a modern lady spiritualist in a book which provokes sceptical comments. Now, had the peay tradition reached Cock Lane, or was the peay-man counterfeiting, very cleverly, some real phenomenon?<sup>1</sup>

We may next examine cases in which, the savage medium being entranced, spirits come to him and answer questions. Australia is so remote, and it is so unlikely that European or American spiritualists suggested their ideas to the older blacks (for mediumship seems to be nearly extinct since the settling of the country), that any transmission of such notions to the Black Fellows must be very ancient. Our authorities are Mr. Brough Smyth, in *Aborigines of Victoria* (i. 472), and Messrs. Fison and Howitt, in *Kamilaroi and Kurnai*, who tell just the same tale. The spirits in Victoria are called *Mrarts*, and are understood to be the souls of Black Fellows dead

<sup>1</sup> Very possibly the whirring roar of the *turndun*, or *ρόυβος*, in Greek, Zufi, Yoruba, Australian, Maori, and South African mysteries is connected with this belief in a whirring sound caused by spirits. See "The Bull-Roarer."

Conditions, and is variable with every variation of either.<sup>1</sup>

The fallacy that a concept has independent existence prior to the particulars out of which it is formed, or that a Plan exists as a potential before it exists as an actual will frequently be met with in the History of Philosophy. Indeed, Aristotle's distinction of *δύναμις* and *ἐνεργεία* was for centuries regarded as a luminous guide.

§ 53. An infirmity closely connected with the foregoing is forgetfulness of the necessity we are under of dislocating the order of Nature, by Analysis and Abstraction; which artifice, since it leads to discovery, may be copiously used on condition of our remembering that it is an artifice, and that the order we have dislocated must be finally restored, if the order in Thought is to correspond with the order in Things.

Science is distinguished from Common Knowledge by its wider reach and more systematic structure, and also by its conscious employment of artifices which our infirmity renders indispensable, and which the unscientific mind employs unconsciously. Abstraction is one of the necessary artifices of research; and the man of science is conscious of what he

is doing when he abstracts certain phenomena from the mass presented to him, and proceeds to deal with those abstractions as if they were the whole reality. Ordinary men do the same, but are unconscious of doing it.

Why must we make this preliminary abstraction—why deviate thus from the actual facts, in order to understand the facts we falsify? The answer is simple. Unless some such simplification be made, all search will be hopelessly baffled by the complexity of phenomena. The parrots of Bacon chatter about Observation; but Observation of cases, however patient and prolonged, will never suffice to disclose the Laws which are enveloped in the cases, and which form the real aim of Science. And what are Laws? They are the *constants* in phenomena, and can only be separated from the *perturbations*, due to other Laws, by a process of abstraction which sets aside all the variable accidents and individual peculiarities accompanying and determining each special case. Let us have Observation, by all means; but of what? Of ore and dross together? or of ore and dross separated? The constants found in every case must be separated from the variables found in varying cases. The mineralogist separates the ore from the dross; and the philosopher separates the constants from the variables. Even the Laws of Motion and Gravitation, universal as they are, could never have been discovered by observation of cases of motion and gravity; a preliminary abstraction eliminated all consideration of the variable resistances. The Laws of chemical affinity could never have been disclosed to Observation, except by a preliminary Analysis, which tore one element away from another, and studied each separately.

<sup>1</sup> Nieto Serrano is worth citing on this question of potentiality: "Es, pues, la fuerza potencial una fuerza que no es tal fuerza, pero que puede serlo; es la posibilidad sobrepuesta por la inteligencia á todo orden determinado. Mas la posibilidad no es absoluta, no es una indiferencia completa respecto del porvenir: esta indiferencia se halla limitada por los hechos, por las fuerzas actuales, por las que aparecen en la totalidad presente, como presentes ó como pasadas, y semejante limitacion constituye una probabilidad, que determina de algun modo la potencia." *Bos ueno de la Ciencia Viviente*, p. 269.

and gone, not demons unattached. The mediums, now very scarce, are *Birraarks*. They were consulted as to things present and future. The Birraark leaves the camp, the fire is kept low, and someone "cooees" at intervals. "Then a noise is heard. The narrator here struck a book against the table several times to describe it." This, of course, is "spirit-rapping." The knocks have a home among the least cultivated savages, as well as in mediæval and modern Europe. Then whistles are heard, a phenomenon lavishly illustrated in certain *séances* held at Rio de Janeiro<sup>1</sup> where children were mediums. The spiritual whistle is familiar to Glanvil and to Homer. Mr. Wesley, at Epworth (1716), noted it among all the other phenomena. The Mrarts are next heard "jumping down," like the *kenaimas*. Questions are put to them, and they answer. They decline, very naturally, to approach a bright fire. The medium (Birraark) is found entranced, either on the ground where the Mrarts have been talking or at the top of a tree, very difficult to climb, "and up which there are no marks of anyone having climbed." The blacks, of course, are peculiarly skilled in detecting such marks. In maleficent magic, as among the Dène Hareskins, the Australian sorcerer has "his head, body, and limbs wound round with stringy bark cords."<sup>2</sup> The enchantment is believed to drag the victim, in a trance, towards the sorcerer. This binding is customary among the Eskimo, and, as Mr. Myers has noted, was used in the rites described by the Oracles in "trance utterances," which Porphyry collected in the fourth century. Whether the binding was thought to restrain the convulsions of the mediums, or whether it was originally a "test condition" to prevent the medium from cheating (as in modern experiments), we cannot discover. It does not appear to be in use among the Maoris, whose speciality is "trance utterance."

A very picturesque description of a Maori *séance* is given in *Old New Zealand*.<sup>1</sup> The story loses greatly by being condensed. A popular and accomplished young chief had died in battle, and his friends asked the *Tohunga*, or medium, to call him back. The chief was able to read and write; he had kept a journal of remarkable events, and that journal, though "unceasingly searched for," had disappeared. This was exactly a case for a test, and that which was given would have been good enough for spiritualists, though not for more reasonable human beings. In the village hall, in flickering firelight, the friends, with the English observer, the "Pakeha Maori," were collected. The medium, by way of a "cabinet," selected the darkest corner. The fire burned down to a red glow. Suddenly the spirit spoke, "Salutation to my tribe," and the chief's sister, a beautiful girl, rushed, with open arms, into the darkness; she was seized and held by her friends. The gloom, the tears, the sorrow, nearly overcame the incredulity of the Englishman, as the Voice came, "a strange melancholy sound, like the sound of a wind blowing into a hollow vessel." "It is well with me," it said, "my place is a good place." They asked of their dead friends; the hollow answers replied, and the Englishman "felt a strange swelling of the chest." The Voice spoke again: "Give my large pig to the priest," and the sceptic was disenchanted. He now thought of the test. "We cannot find your book," I said; "where have you concealed it?" The answer immediately came: "Between the *Tahuahu* of my house and the thatch, straight over you as you go into the door." Here the brother rushed out. "In five minutes he came back, *with the book in his hand*." After one or two more remarks the Voice came, "Farewell!" from deep beneath the ground. "Farewell!" again from high in air. "Farewell!" once more came moaning

• <sup>1</sup> *Proc. S. P. R.*, xix. 180.  
• <sup>2</sup> Brough Smyth, i. 475.

<sup>1</sup> Auckland, 1863, ch. x.

Every one knows that unless Kepler and Newton had boldly disregarded all consideration of planetary perturbations which were nevertheless essential facts in planetary movements, they would have been unable to detect the planetary Laws. But this preliminary falsification was rectified by their successors, who deduced the perturbations from secondary gravitations. It is this twofold process which I propose to erect into a logical canon applicable in all inductive inquiry,<sup>1</sup> the Canon of Restitution:—

§ 54 Every investigation requires for its completion that Analysis be succeeded by Synthesis—*i.e.*, the preliminary abstractions be succeeded by a restoration of the rejected elements, so that the synthesis be made to correspond with reality.

In establishing the Laws of Mechanics philosophers falsify the facts to the extent of assuming that the lines of direction are undisturbed, and that the materials

are perfect. In reality, this is never so; and the practical mechanic has to rectify the rational Law by the restitution of the discarded elements. His action is synthetic, and his calculations must be so likewise. At peril of ignoble failure, he has to ascertain what are the actual lines of direction, as determined by the rational Law and the perturbing resistances; he has also to ascertain to what extent the materials are uniform.

§ 55 Two illustrations will suffice to exhibit the neglect of this canon. The undulatory theory, of light and heat, is justly regarded among the triumphs of modern science. It starts from oscillating atoms having no dimensions—mere mathematical points. This is a bold disregard of concrete observation; points without form or size are abstractions so entirely removed from reality as to be unimaginable. Nevertheless, Analysis occupied solely with oscillations, and discarding the oscillating atoms, as if they were not elements of the synthesis, has furnished Laws of vibration that explain many of the most remarkable phenomena of light and heat—*e.g.*, polarisation, refraction, interference. This success justifies the falsification. But inasmuch as the theory fails to account for other important phenomena, the Canon of Restitution suggests that the failure may lie in this falsification, and that the outlying elements may furnish a solution of the unexplained difficulties. If the atoms exist at all, it is unthinkable that they should not have certain geometric properties, and these geometric properties entail dynamic properties. If they have Form, they must have a corresponding Movement. As it is impossible to conceive them unextended, as they must have size and form, they must have the motions deducible therefrom.

<sup>1</sup> Compare Auguste Comte: *Synthèse Subjective*, p. 604. Some time after this Canon with its illustrations had appeared in the *Fortnightly Review*, I found this passage in Comte's *Politique Positive*, vol. i., p. 426: "Les événements ne pouvant s'étudier que dans des êtres, il faut écarter les circonstances propres à chaque cas pour y saisir la loi commune. C'est ainsi, par exemple, que nous ignorerions encore les lois dynamiques de la pesanteur si nous n'avions pas fait d'abord abstraction de la résistance et de l'agitation des milieux. Même, envers les moindres phénomènes nous sommes donc obligés de décomposer pour abstraire avant de pouvoir obtenir cette réduction de la variété à la constance que poursuivent toujours nos saines méliorations. Or ces simplifications préalables sans lesquelles la vraie science n'existerait jamais exigent partout des restitutions correspondantes quand il s'agit de prévisions réelles." Although I had not marked the passage previously, nor realised its full significance, it is highly probable that I was unconsciously guided by it in the construction of the canon.

through the distant darkness of the night. The deception was perfect. 'A ventriloquist,' said I, 'or—or, perhaps the devil!'" The *seance* had an ill end: the chief's sister shot herself.

This was decidedly a well-got-up affair for a colonial place. The Maori oracles are precisely like those of Delphi. In one case a chief was absent, was inquired for, and the Voice came, "He will return, yet not return." Six months later the chief's friends went to implore him to come home. They brought him back a corpse; they had found him dying, and carried away the body. In another case, when the Maori oracle was consulted as to the issue of a proposed war, it said: "A desolate country, a desolate country, a desolate country!" The chiefs, of course, thought the *other* country was meant, but they were deceived, as Croesus was by Delphi, when he was told that he "would ruin a great empire." In yet another case the Maoris were anxious for the spirits to bring back a European ship, on which a girl had fled with the captain. The Pakeha Maori was present at this *seance*, and heard the "hollow, mysterious, whistling Voice, 'The ship's nose I will batter out on the great sea.'" Even the priest was puzzled; this, he said, was clearly a deceitful spirit, or *atua*, like those of which Porphyry complains—like most of them, in fact. But, ten days later, the ship came back to port; she had met a gale, and sprung a leak in the bow, called, in Maori, "the nose" (*ihu*). It is hardly surprising that some Europeans used to consult the oracle.

Possibly some spiritualists may take comfort in these anecdotes, and allege that the Maori mediums were "very powerful." This is said to have been the view taken by some American believers, in a very curious case, reported by Kohl; but the tale, as he tells it, cannot possibly be accurate. However, it illustrates and strangely coincides with some stories related by the Jesuit Père Lejeune, in the Canadian Mission, about 1637. The instances bear both

on clairvoyance and on the force which is said to shake houses as well as to lift tables, in the legends of the modern thaumaturgists. We shall take Kohl's tale before those of the old Jesuit. Kohl first describes the "Medicine Lodge," already alluded to in the account of Dene Hareskin magic.

The "lodge" answers to what spiritualists call "the cabinet," usually a place curtained off in modern practice. Behind this the medium now gets up his "materialisations," and other cheap mysteries. The classical performers of the fourth century also knew the advantage of a close place,<sup>1</sup> "where the power would not be scattered." This idea is very natural, granting the "power." The modern Ojibway "close place," or lodge, like those seen by old Jesuit fathers, "is composed of stout posts, connected with basket-work, and covered with birch bark. It is tall and narrow, and resembles a chimney. It is very firmly built, and two men, even if exerting their utmost strength, would be unable to move, shake, or bend it."<sup>2</sup> On this topic Kohl received information from a gentleman who "knew the Indians well, and was even related to them through his wife." He, and many other white people thirty years before, saw a *Jossakeed*, or medium, crawl into such a lodge as Kohl describes, beating his tambour. "The entire case began gradually trembling, shaking, and oscillating slowly amidst great noise.....It bent back and forwards, up and down, like the mast of a vessel in a storm. I could not understand how those movements could be produced by a man inside, as we could not have caused them from the exterior." Two voices, "both entirely different," were then heard within. "Some spiritualists" (here is the weakest part of the story) "who were present explained it through modern spiritualism." Now this was

<sup>1</sup> Εν τινι στερεῷ χωρίῳ, ὥστε μὴ ἐπιπολὺ ὑπερσθαι.—Iamblichus.

<sup>2</sup> Kohl, *Kitchi-Gami*, p. 278.

But these facts have hitherto been disregarded. Let them be restored, and let mathematical analysis be directed to the problem under this new aspect. The movement of the wave—*i.e.*, the movement of translation—has been sufficiently analysed; now let the movement of the atom—*i.e.*, the movement of rotation, according to Poinsot's immortal principles—be investigated. In the mechanics of translation the form of a body is indifferent, but in the mechanics of rotation the form is everything. If the investigation in this direction failed to clear up the present difficulties, it would at least have this result, that it would prove the rotation of the atoms to be legitimately disregarded in the theory of Light and Heat, because not sensible factors in the result.

§ 56. The second illustration of our Canon shall be the question of the Origin of Species.

Are Species variable or invariable? This question resembles that of planetary perturbation. The abstract Law of Reproduction—that Like produces Like—is unassailable as a Rational Law; and it points to the fixity of Species as a fundamental truth. But the Law is Rational, not Natural. It abstracts the Organism from the Medium—one factor from its co-efficient—and thus violates the synthesis of Nature, which never yet presented an Organism independent of the Medium in which it lived. And there is matter for meditation in the fact that only in modern Biology has the necessary reaction of the Medium been steadily conceived as one of the necessary elements of every biological problem; formerly the Organism was always conceived as if it were no less independent really than it was ideally.

The restitution of the discarded

elements—namely, the reaction of the Medium and the Struggle for Existence, which act as perturbations of the biological Law—brings forward this problem: What is the sweep of the perturbations? Can these perturbations be assigned to some secondary biological Law (the reaction of the Medium), and can they, by accumulation, determine a change in the primary Law?

At present we have two groups of thinkers, each relying on a group of indisputable facts: one proves the constancy of forms, and another proves the variability of forms. The complete theory must include and reconcile both groups. For this it is necessary that a rational Biology should elaborate a theory of the Organism, and a theory of the Medium; then the Law of Reproduction being completed by the restitution of the Perturbations, also reduced to Law, we shall have a possible synthesis explaining all the cases.

§ 57. The Canon just exhibited is needful as a corrector of our natural infirmity, which first makes the separation necessary, and then forgets that the restitution is no less so. The anthropomorphic infirmity, which suffuses Objects with our Feelings, making Cause inseparably associated with Effort, and Attraction with Desire, is too well known to need more than a passing mention here. It is a fertile source of metaphysical speculation.

Another is the strange assumption, that because knowledge is the bringing of the Unknown under the categories of the Known (for only thus can the Unknown be thinkable at all), therefore we can discover the further relations of this Unknown. For instance, Kant, in the preface to the second edition of the *Kritik*, says that Will, the phenomenon,

not before 1859, when Kohl's book appeared in English, and modern spiritualism, as a sect of philosophy, was not born till 1848, so that thirty years before 1859, in 1829, there were no modern spiritualists. This, then, is absurd. However, the tale goes on, and Kohl's informant says that he knew the *jossakeed*, or medium, who had become a Christian. On his deathbed the white man asked him how it was done: "now is the time to confess all truthfully." The converted one admitted the premises—he was dying a Christian man—but, "Believe me, I did not deceive you at that time. I did not move the lodge. It was shaken by the power of the spirits. I could see a great distance round me, and believed I could recognise the most distant objects." This "with an expression of simple truth." It is interesting, but the interval of thirty years is a naked impossibility. In 1829 there were queer doings in America. Joe Smith's Mormons "spoke with tongues," like Irving's congregation at the same time; but there were no modern spiritualists. Kohl's informant should have said "ten years ago" if he wanted his anecdote to be credited, and it is curious that Kohl did not notice this circumstance.

We now come to the certainly honest evidence of the Père Lejeune, the Jesuit missionary. In the *Relations de la Nouvelle France* (1634) Lejeune discusses the sorcerers, who, as rival priests, gave him great trouble. He describes the Medicine Lodge just as Kohl does. The fire is put out, of course, the sorcerer enters, the lodge shakes, voices are heard in Montagnais and Algonkin, and the Father thought it all a clumsy imposture. The sorcerer, in a very sportsmanlike way, asked him to go in himself and try what he could make of it. "You'll find that your body remains below and your soul mounts aloft." The cautious Father, reflecting that there were no white witnesses, declined to make the experiment. This lodge was larger than those which Kohl saw,

and would have held half-a-dozen men. This was in 1634; by 1637 Père Lejeune began to doubt whether his theory that the lodge was shaken by the juggler would hold water. Two Indians—one of them a sorcerer, Pigarouich, "me descouvrant avec grande sincérité toutes ses malices"—"making a clean breast of his tricks"—vowed that they did not shake the lodge—that a great wind entered *fort promptement et rudement*, and they added that the "tabernacle" (as Lejeune very injudiciously calls the Medicine Lodge) "is sometimes so strong that a single man can hardly stir it." The sorcerer was a small weak man. Lejeune himself noted the strength of the structure, and saw it move with a violence which he did not think a man could have communicated to it, especially not for such a length of time. He was assured by many (Indian) witnesses that the tabernacle was sometimes laid level with the ground, and again that the sorcerer's arm and legs might be seen projecting outside, while the lodge staggered about—nay, more, the lodge would rock and sway after the juggler had left it. As usual, there was a savage, Auiskuouaskousit, who had seen a juggler rise in air out of the structure, while others, looking in, saw that he was absent. St. Theresa had done equal marvels, but this does not occur to the good Father.

The savage with the long name was a Christian catechumen, and yet he stood to it that he had seen a sorcerer disappear before his very eyes, like the second-sighted Highlander in Kirk's *Secret Commonwealth* (1691). "His neibours often perceaved this man to disappear at a certane place, and about one hour after to become visible." It would be more satisfactory if the Father had seen these things himself, like Mrs. Newton Crosland, who informs the world that, when with Robert Chambers and other persons of sanity, she felt a whole house violently shaken, trembling, and thrilling in the presence of a medium—not a professional, but a young lady

is not free, because it is subject to the laws of phenomena; but Will, the thing in itself, may be thought as free, because no longer subject to the laws of phenomena. Now, he admits that things in themselves are beyond knowledge. If we cannot know the *Ding an sich*, how can we predicate anything of them? In his *Prolegomena* he has this illustration of analogy: "I can never do anything to another without thereby giving him the right to do the same under similar conditions; just as no body can act on another without thereby causing an equal reaction on itself. Here Right and Force are two entirely different things, but there is a complete resemblance in their relations. By means of such analysis I can consequently attain conceptions of the relations of things, which things are absolutely unknown to me."<sup>1</sup> If the things were absolutely unknown, how could the relations, upon which the analogy is founded, be known?

The fact is, men are constantly affirming certain existences to be Unknown and Unknowable, yet in the same breath affirming relations of them which presuppose knowledge. They will admit that Matter, as *Ding an sich*, is absolutely and necessarily extruded from the sphere of possible knowledge; yet they will proceed to argue that it must, or must not, be constituted of discrete atoms—that these atoms are, or are not, in contact. They will admit that it is impossible for us to know God otherwise than through Revelation. Yet they have not the slightest misgiving in affirming many things of God's nature, interpreting his intentions, without any warrant in Revelation. Thus implying that they know what they have declared unknowable.

This list of infirmities might be extended, but it may close here. Others will meet us in the *History of Philosophy*.

## V.—NECESSARY TRUTHS

§ 58. THE great question which has been debated in the schools respecting the Origin and Limits of Knowledge has of late years resolved itself very much into a debate respecting the nature of Necessary Truths. The philosophers who hold that, over and above the results of Experience, in its widest acceptation, we have truths of a higher authority and a larger reach, springing from a nobler source, invoke, as decisive evidence of

their opinion, the existence of Necessary Truths, which cannot (they affirm) be the results of Experience.

This position rests upon a radical misconception of Experience, and a psychological misconception of the nature of Necessary Truths; both of these mistakes it will be important to clear away. We may admit, at the outset, that the mind is in possession of many ideas which could never have been directly given in Experience, if Experience be restricted to Sense. The restriction, however, is unwarranted. Ratiocination is as much

<sup>1</sup> Kant: *Prolegomena zu jeder künftigen Metaphysik*, § 58. Werke, iii. 285.

amateur. Here, of course, we greatly desire the evidence of Robert Chambers. Spirits came to Swedenborg with a wind, but it was only strong enough to flutter papers, "the cause of which," as he remarks with *naïveté*, "I do not yet understand." If Swedenborg had gone into a Medicine Lodge, no doubt, in that "close place," the phenomena would have been very much more remarkable. In 1853 Père Arnaud visited the Nasquapees, and describes a *séance*. "The conjurers shut themselves up in a little lodge, and remain for a few minutes in a pensive attitude, cross-legged. Soon the lodge begins to move like a table turning, and replies by bounds and jumps to the questions which are put to the conjurer."<sup>1</sup> The experiment might be tried with a modern medium.

Father Lejeune, in 1637, gives a case which reminds us of Home. According to Home, and to Mrs. S. C. Hall, and other witnesses, when "in power" he could not only handle live coals without being burned, but he actually placed a large glowing coal, about the size of a cricket-ball, on the pate of Mr. S. C. Hall, where it shone redly through Mr. Hall's white locks, but did him no manner of harm. Now Father Pijart was present, *tesmoin oculaire*, when a Huron medicine-man heated a stone red-hot, put it in his mouth, and ran round the cabin with it, without receiving any harm. Father Brébeuf, afterwards a most heroic martyr, sent the stone to Father Lejeune; it bore the marks of the medicine-man's teeth, though Father Pijart, examining the man, found that lips and tongue had no trace of burn or blister. He reasonably concluded that these things could not be done "*sans l'opération de quelque Démon.*" That an excited patient should not feel fire is, perhaps, admissible; but that it should not scorch either Mr. Hall, or Home, or the Huron, is a large demand on our credulity. Still, the evidence in this case (that of Mr. Crookes and Lord Crawford) is much better than usual.

It would be strange if practices analogous to modern "table-turning" did not exist among savage and barbaric races. Thus Mr. Tylor, in *Primitive Culture* (ii. 156), quotes a Kutuchtu Lama, who mounted a bench, and rode it, as it were, to a tent where stolen goods were concealed. The bench was believed, by the credulous Mongols, to carry the Lama! Among the Manyanja of Africa thefts are detected by young men holding sticks in their hands. After a sufficient amount of incantation, dancing, and convulsions, the sticks become possessed, the men "can hardly hold them," and are dragged after them in the required directions.<sup>2</sup> These examples are analogous to the use of the Divining Rod, which is probably moved unconsciously by honest "dowsers"; "sometimes they believe that they can hardly hold it." These are cases of movement of objects in contact with human muscles, and are, therefore, not at all mysterious in origin. A regular case of movement *without* contact was reported from Thibet, by M. Tschérépanoff, in 1855. The modern epidemic of table-turning had set in when M. Tschérépanoff wrote thus to the *Abbeille Russe*:<sup>2</sup> "The Lama can find stolen objects by following a table which flies before him." But the Lama, after being asked to trace an object, requires an interval of some days before he sets about finding it. When he is ready, he sits on the ground reading a Thibetan book, in front of a small square table, on which he rests his hands. At the end of half-an-hour he rises and lifts his hands from the surface of the table: presently the table also rises from the ground and follows the direction of his hand. The Lama elevates his hand above his head, the table reaches the level of his eyes; the Lama walks, the table rushes before him in the air, so rapidly that he can scarcely keep up with

<sup>1</sup> Rowley, *Universities' Mission to Central Africa*, p. 217: cited by Mr. Tylor.

<sup>2</sup> Quoted in *La Table Parlante*, a French serial, No. 1, p. 6.

an organic function as Sensation. Just as the base line gives the indirect, yet certain, measure of the inaccessible line of the triangle, so from the data of Experience may we measure consequences which are not directly accessible. But the analogy must not be perverted: the base line only gives us the directly inaccessible line, it does not give other lines; the data of Experience only give the directly inaccessible consequences of the data, not the consequences of *other* data; and it is owing to an imperfect appreciation of such limits in the deduction of the unknown from the known that the doctrine of Necessary Truths, independent of Experience, has attained currency.

§ 59. What is Experience? It is the sum of the actions of Objects on Consciousness; or—to word it differently—the sum of the modifications which arise from the relations of the Sensitive Organism and its environment. In this sum are included:—1st. The direct affections of Consciousness in its relations to the outer world; 2nd. The results of those affections through the action of Consciousness in combining, classifying, and transforming the materials furnished by Sense. Thus Experience, in its widest acceptation, is the product of two factors: Sensation and Laws of Consciousness.

So far all thinkers are agreed. The point of separation is this: Are the Laws of Consciousness evolved out of the relations of the Sensitive Organism and its environment; or are they pre-existent, and independent of any such relations? When the empirical school declares its acceptance of the former alternative, it seems to proclaim an absurdity—Experience, being a product of Sensations and Laws, is said to produce the Laws of

which it is the product. But this verbal contradiction is got rid of when we distinguish Experience from Experiences. Every particular modification of Consciousness is a particular experience. Each modification prepares the way for successors, and influences them. The Laws are evolved through these successive modifications, and Experience is the general term expressing the sum of these modifications.

But are the Laws evolved? The Sensational School has greatly obscured this question by the unscientific conception of the mind as a *tabula rasa* upon which Things inscribe their characters—a mirror passively reflecting the images of objects. This presupposes that Consciousness is absolved from the universal law of action and reaction, presupposes that the Organism has no movements of its own; and thus Psychology is separated from its only true biological ground. The *a priori* School commits the opposite mistake of conceiving Consciousness as a pure spontaneity, undetermined by the conditions of the Organism and its environment; a spontaneity which brings Laws, not evolved from relations, and organised as results, but derived from a supra-mundane, supra-vital source.

§ 60. We cannot take a step unless we admit that Consciousness is an active reagent, even in its first stage of evolution. Sensibility is not passive, cannot be conceived otherwise than as an excitation. Nor is this all. Biology teaches that the Sensitive Organism inherits certain aptitudes, as it inherits the structure, of its progenitors; so that the individual may be said to resume the Experience of the race. Faculties grow up in the development of the race. Forms of Thought, which are essential parts of the mechanism of Experience, are evolved,

its flight. The table then spins round, and falls on the earth; the direction in which it falls indicates that in which the stolen object is to be sought. M. Tschérépanoff says that he saw the table fly about forty feet, and fall. The stolen object was not immediately discovered; but a Russian peasant, seeing the line which the table took, committed suicide, and the object was found in his hut. The date was 1831. M. Tschérépanoff could not believe his eyes, and searched in vain for an iron wire, or other mechanism, but could find nothing of the sort. This anecdote, if it does not prove a miracle, illustrates a custom.<sup>1</sup>

As to clairvoyance among savages, the subject is comparatively familiar. Montezuma's priests predicted the arrival of the Spaniards long before the event. On this point, in itself well vouched for, Acosta tells a story which illustrates the identity of the "astral body," or double, with the ordinary body. In the witch stories of Increase Mather and others, where the possessed sees the phantasm of the witch, and strikes it, the actual witch proves to be injured. Story leads to story, and Mr. Thomas Hardy somewhere tells one to this effect. A farmer's wife, a woman of some education, fell asleep in the afternoon, and dreamed that a neighbour of hers, a woman, was sitting on her chest. She caught at the figure's arm in her dream, and awoke. Later in the day she met her neighbour, who complained of a pain in the arm, just where the farmer's wife seized it in her dream. The place mortified, and the poor lady died. To return to Montezuma. An honest labourer was brought before him, who made this very tough statement. He had been carried by an eagle into a cave, where he saw a man in splendid dress sleeping heavily. Beside him stood a burning stick of incense such as the Aztecs used. A

voice announced that this sleeper was Montezuma, prophesied his doom, and bade the labourer burn the slumberer's face with the flaming incense stick. The labourer reluctantly applied the flame to the royal nose, "but he moved not, nor showed any feeling." On this anecdote being related to Montezuma, he looked on his own face in a mirror, and "found that he was burned, the which he had not felt till then."<sup>1</sup>

On the Coppermine River the medicine-man, according to Hearne, prophesies of travellers, like the Highland second-sighted man, ere they appear. The Finns and Lapps boast of similar powers. Scheffler is copious on the clairvoyant feats of Lapps in trance. The Eskimo Angakut, when bound with their heads between their legs, cause luminous apparitions, just as was done by Mr. Stanton Moses and by the mediums known to Porphyry and Iamblichus; the Angakut also send their souls on voyages, and behold distant lands. One of the oddest Angekok stories in Rink's *Tales and Traditions of the Eskimo* (p. 324) tells how some children played at magic, making "a dark cabinet," by hanging jackets over the door to exclude the light. "The slabs of the floor were lifted, and rushed after them"—a case of "movement of objects without physical contact." This phenomenon in future attended the young medium's possessions, even when he was away from home. This particular kind of manifestation, so very common in trials for witchcraft, and in modern spiritualistic literature, does not appear to prevail much among savages. Persons otherwise credible and sane tell the authorities of the Psychical Society that, with only three amateurs present, things are thrown about, and objects are brought from places many miles distant and tossed on the table. These are technically termed *apports*. The writer knows

<sup>1</sup> Colonel A. B. Ellis, in his work on the Yorubas (1894), reports singular motions of a large wooden cylinder. It is used in ordeals.

<sup>1</sup> *The Natural and Morall History of the East and West Indies*, p. 566, London, 1604.

just like the Forms of other vital processes. In fact, as Function is only the Form of activity of an Organ, it is obvious that, if the Organ is evolved, the Function is evolved, and with it the Laws of its action.

The *à priori* School denies this, not indeed explicitly, but with energetic implication. It does not boldly affirm that Function can exist without an organ; but it denies that Consciousness is a Function. Hence it has no difficulty in maintaining that the Mind of an infant is full-formed at birth, equipped with all its faculties, though without those materials of Thought which will afterwards be furnished in Experience. How can this be? The Aristotelian refuge of *potential existence* (§ 52) is ready for the escape of the metaphysician pursued by Fact. To us, who decline that refuge, the assertion that the Mind is full-formed at birth is as rational as the assertion that the infant is born a full-formed man, equipped with all his faculties of locomotion, speech, reproduction, etc. The infant may *become* a man, but *is* an infant, and his mind is undeveloped; if the spiritual experiences of the infant were suddenly arrested, does any one suppose that we should find in them those Fundamental Truths and Forms of Thought which Psychologists declare to be the native dowry of the mind?<sup>1</sup> I do not know that any one frankly affirms this; but I know that the *à priori* School implies it, in maintaining that we have within us a source of knowledge which is not evolved in Experience.

§ 61. Kant is the most potent philosopher of this school, and, although in my criticism of the *Kritik* I have had to

consider his position, I cannot pass it by here without challenge; referring the reader therefore to what is said (vol ii., p 460 and pp. 475 sq., *History of Philosophy*, 3rd edition), I will here notice only such points as the argument needs.

Kant says: "There are two branches of knowledge: Sensibility and Understanding—which possibly spring from a common but unknown root. Through the one objects are *given*, through the other they are *thought*."<sup>2</sup> Except for the reservation in the word "possibly," this is unimpeachable; but the reservation was dictated by his exaggerated view of the part played by the Subject in the construction of knowledge. He made an entity out of a relation. He thought the subjective element could be separated from the objective; and, thus separated, it would reveal itself as independent of and antecedent to Experience, constituting indeed the very conditions of Experience. I have shown this to be a fallacy. "The understanding," he says, "does not draw its laws (*à priori*) from Nature, but prescribes them to Nature—*schreibt sie dieser vor*."<sup>2</sup>

§ 62. The error arises from a false point of view, which mistakes Anatomy for Morphology and Logic for Psychology. Accepting the human understanding in its developed forms, he presents us with these *constituent forms* as if they were *initial conditions*; the results which are developed through successive experiences are presented as the primary conditions of Experience: the generalisations are made antecedent to the particulars from which they are drawn. We are told that these Forms are implied in the particular

<sup>1</sup> *Kritik*. Einleitung: sub finem.

<sup>2</sup> Compare the striking passage in Mansel's *Metaphysics*, p. 45.

<sup>2</sup> *Prolegomena zu jeder künftigen Metaphysik*, ii. § 36. Compare also his *Anthropologie*, i. § 9.

a case in which this was attested by a witness of the most unimpeachable character. But savages hardly go so far. Bishop Callaway has an instance in which "spirits" tossed objects into the midst of a Zulu circle; but such things are not usual. Savages also set out food for the dead; but they scarcely attain to the credulity, or are granted the experience, of a writer in the *Medium*.<sup>1</sup> This astonishing person knew a familiar spirit. At dinner, one day, an empty chair began to move, "and, in answer to the question whether it would have some dinner, said 'Yes.'" It chose *croquets de pomme de terre*, which were placed on the chair in a spoon, lest the spirit, whose manners were rustic, should break a plate. "In a few seconds I was told that it was eaten; and, looking, found the half of it gone, with the marks showing 'the teeth.'" Perhaps few savages would have told such a tale to a journal which ought to have a large circulation —among believers.

The examples of savage spiritualism which have been adduced might probably receive many additions—those are but gleanings from a large field carelessly harvested. The phenomena have been but casually studied; the civilised mind is apt to see in savage *séances* nothing but noisy buffoonery. We have shown that there is a more serious belief involved, and we have adduced cases in which white men were not unconscious of the barbarian spell. It also appears that the now recognised phenomena of hypnotism are the basis of the more serious savage magic. The production of hypnotic trances, perhaps of hypnotic hallucinations, is a piece of knowledge which savages possessed (as they were acquainted with quinine), while European physicians and philosophers ignored or laughed at it. Tobacco and quinine were more acceptable gifts from the barbarian. His magic has now and then been examined by a competent anthropo-

logist, like Mr. Im Thurn, and Castren closely observed the proceedings of the bound and bounding Shamans among the Samoyeds. But we need the evidence both of anthropologists and of adepts in conjuring. They might detect some of the tricks, though Mr. Kellar, a professional conjurer and exposer of spiritualistic imposture, has been fairly baffled (he says) by Zulus and Hindus, while educated Americans are puzzled by the Pawnees. Mr. Kellar's plan of displaying a few of his own tricks was excellent; the dusky professionals were stimulated to show theirs, which, as described, were miracles. The Pakeha Maori already quoted saw a Maori *Tohunga* perform "a very good miracle as times go," but he does not give any particulars. The late Mr. Davey, who started as a spiritualist catechumen, managed, by conjuring, to produce answers to questions on a locked slate, which is as near a miracle as anything. But Mr. Davey is dead, though we know his secret, while it is improbable that Mr. Maskelyne will enrich his *répertoire* by travelling among Zulus, Hindus, and Pawnees. As savages cease to be savages, our opportunities of learning their mystic lore must decrease.

To one point in this research the notice of students in folklore may be specially directed. In the attempt to account for the diffusion of popular tales such as *Cinderella*, we are told to observe that the countries most closely adjacent to each other have the most closely similar variants of the story. This is true, as a rule; but it is also true that, while Scandinavian regions have a form of *Cinderella* with certain peculiarities not shared by Southern Europe, those crop up sporadically, far away, among Kaffirs and the Indian "aboriginal" tribe of Santhals. The same phenomenon of diffusion occurs when we find savage mediums tied up in their trances, all over the North, among Canadian Hareskins, among Samoyed and Eskimo, while the practice ceases at a given point in Labrador, and gives place to Medicine

<sup>1</sup> February 9th, 1872. Quoted by Mr. Tylor, in *Primitive Culture*, ii., 39, 1873.

experiences. Granted: if they were not implied, they could not have been elicited. Logic is justified in disregarding the process of evolution, content with the result; for Logic has to exhibit the Forms of Thought, not their origin. In like manner, Anatomy has to do with the organs of the body, not with their genesis, which belongs to another branch of the science, Morphology. Now, the question of Experience is a question of origin; and Psychology reveals that Experience is the self-woven garment of Thought in which every thread is an experience. To assert that *à priori* principles or Forms of Thought render Experience possible is to assert either that these Forms exist before Thought itself exists, or else it is to confound the general with the particulars. Let us see this in an analogy.

§ 63. The vertebrate type is by some *à priori* thinkers held to be the necessary Form which renders the vertebrate animal possible. Anatomically, this is acceptable. But what says Morphology? Does it disclose the existence of a Type anterior to the existence of the animal? or does it not disclose the emergence of the typical Form in the successive phases of the animal's development? Obviously, the idea of pre-existences is a figment, a mere *πρότερον πρότερον* (§ 50).

Again: a frog breathes by means of lungs. The lungs, once developed and brought into action, become a necessary condition of possible breathing. Ever afterwards the frog's existence is determined by this condition. But if we take the frog in its early stages, we find it breathing by means of gills, the lungs not having yet come into play. At this period it is not a lung-breathing animal; the necessary condition is somewhat different. In the course of development the forelegs begin to press upon the

arteries which supply the gills, and the consequence of this pressure is the gradual disappearance of the gills. Meanwhile the lungs pass from their rudimentary inactive state into an active state, and the disappearing gills are replaced by the emerging lungs. It is thus also with the development of Mind: the necessary conditions which render experiences possible in the early stages are not the same in the later stages. Mind is a successive evolution from experiences, and its laws are the action of results. The Forms of Thought are developed just as the Forms of an Organism are developed. The infant Newton is no more the author of the *Principia* than the egg is the game-cock.

Indeed, this notion of *à priori* Forms, connate if not innate, is a violation of the ground-principle of Biology, and consequently, as all but metaphysicians must admit, of Psychology. If there is one lesson taught us everywhere in Biology, it is that nothing which is definitive is primitive—no form characteristic of the developed state is to be found in the germinal state. Therefore, unless we maintain that Mind is, *ab initio*, adult, as to its powers if not as to its Knowledge—that it does not develop, but only appears—we must admit that with Mind, as with Body, there is not preformation or pre-existence, but evolution and epigenesis.

§ 64. What is it prevents some men from accepting this alternative? It is that they discover in the adult mind principles which cannot, they affirm, be evolved from Experience. Necessity and universality point to an *à priori* source. Necessity is not given in any particular experience. Universality is not given in any number of experiences. Hence (here lies the fallacy!) they are not empirical.

Lodges. The binding then reappears, if not in Australia, certainly in the ancient Greek ceremonial. The writer is not acquainted with "the bound and bounding young man" in the intervening

regions, and it would be very interesting to find connecting cases, stepping-stones, as it were, by which the rite passed from the Levant to the frozen North.

## X.

## ANCIENT SPIRITUALISM

In the *Revue des Deux Mondes* for 1856, tome i., M. Littré published an article on table-turning and "rapping spirits." M. Littré was a savant whom nobody accused of superstition, and France possessed no clearer intellect. Yet his attitude towards the popular marvels of the day—an attitude at once singular and natural—shows how easily the greatest minds can pay themselves with words. A curious reader, in that period of excitement about "spiritualism," would turn to the *Revue*, attracted by M. Littré's name. He would ask: "Does M. Littré accept the alleged facts: if so, how does he explain them?" And he would find that this guide of human thought did not, at least, *reject* the facts; that he did not (as he well might have done) offer imposture as the general explanation; that he regarded the topic as very obscure and eminently worthy of study, and that he pooh-poohed the whole affair!

This is not very consistent or helpful counsel. Like the rest of us, who are so far beneath M. Littré in grasp and in weight of authority, he was subject to the *idola fori*, the illusions of the market-place. It would never do for a great scientific sceptic to say: "Here are strange and important facts of human nature; let us examine them as we do all other natural phenomena"—it would

never do for such a man to say that without qualification. So he concluded his essay in the pooh-pooh tone of voice. He first gives a sketch of abnormalities in mortal experience, as in the case of mental epidemics, of witchcraft, of the so-called prophets in the Cevennes, of the Jansenist marvels. He mentions a nunnery where, "in the sixteenth century," there occurred, among other phenomena, movements of inanimate objects, pottery specially distinguishing itself, as in the famous "Stockwell mystery." Unluckily, he supplies no references for these adventures.<sup>1</sup> The *Revue*, being written for men and women of the world, may discuss such topics, but need not offer exact citations. M. Littré, on the strength of his historical sketch, decides, most correctly, that there is *rien de nouveau*, nothing new, in the spirit-rapping epidemic. "These maladies never desert our race." But this fact hardly explains *why* "vessels were dragged from the hands" of his nuns in the sixteenth century.

In search of a cause, he turns to hallucinations. In certain or uncertain physical conditions, the mind can project and objectify its own creations. Thus Gleditch saw the dead Maupertuis, with perfect distinctness, in the *salle* of the Academy at Berlin. Had he not known

<sup>1</sup> *Revue des Deux Mondes*, 1856, tome i., p. 853.

We affirm that they belong to Experience, are products of Experience, and of Experience only; they are the results of that movement of Thought which passes from particulars to generals. I shall presently show that they are necessities of Thought under the limitations of Experience. Of course, it is requisite to avoid the common confusions on this subject, and not restrict Experience to Sense, as many unwarrantably restrict it. Thus Dr. Thomas Brown repeats the false statement commonly accepted as an axiom, that "Experience teaches us the past only, not the future." Is this so? Is it not the fact that, although experiences are only past modifications of Consciousness, they have a forward projection, and hence Experience teaches—whether correctly or falsely—the future irresistibly? Expectation is surely a product of experiences. Association is experience. When a dog, having once experienced the pain produced by a stick falling swiftly on his ribs, again sees me about to strike him, is there anything over and above his modified consciousness (Experience) which causes him to foresee pain to himself in that preliminary? The metaphysician wants an occult something to give this simple case the requisite obscurity. "It is not to experience alone," he says, "that we must have recourse for the origin of our belief that the future will resemble the past, but to some other principle which converts the simple facts of experience into a general expectation or confidence."<sup>1</sup> This is easily said, but Brown is forced to add: "This principle, since it cannot be derived from Experience itself, which relates only to the past, must be.....an

original principle of our nature." A very typical example of metaphysical logic! If the "original principle" mean something born with us, ready to receive our experiences as in a mould, I affirm this to be the *πατέρων πρότερον* fallacy. If it mean no more than that our psychical nature is such as to group together phenomena experienced together, so that when once the stick has been coupled with pain the two ideas are associated, then indeed there is no objection to the phrase, except its mysteriousness.<sup>2</sup>

§ 65. Having thus defined and explained what is the sense in which Experience is legitimately held, we may address ourselves to the question of Necessary Truths, and see whether they point to a source of knowledge which is superior to, or at least independent of, Experience.

It may be convenient to use the term empirical, as opposed to *a priori*, to designate what is contingent, as opposed to what is necessary. But Kant himself saw that the distinction is only verbal, and in the opening section of the *Kritik* says: "We are wont to call many conclusions, which have their source in experience, *a priori*, simply because they are not drawn immediately from experience, but from a general rule, which was, nevertheless, drawn from experience. Thus we say of a man who undermined his house: He might have known *a priori* that the house would fall in—i.e., he need not have waited for the experience of its actual fall. Yet purely a

<sup>1</sup> "If we think in relations, and if relations have certain universal forms, it is manifest that such universal forms of relations will become universal forms of our consciousness. And if these further universal forms are thus explicable, it is superfluous, and therefore unphilosophical, to assign them an independent origin."—Spencer: *First Principles*, p. 229.

<sup>1</sup> Brown: *Lectures on the Philosophy of the Mind*, vi.

that Maupertuis was dead, he could have sworn to his presence (p. 866). Yes; but how does that explain volatile pots and pans? Well, there are *collective* hallucinations, as when the persecuted in the Cevennes, like the Covenanters, heard non-existent psalmody. And all witches told much the same tale; apparently because they were collectively hallucinated. Then, were the spectators of the agile crockery collectively hallucinated? M. Littré does not say so explicitly, though this is a conceivable theory. He alleges, after all his scientific statements about sensory troubles, that "the whole chapter, a chapter most deserving of study, which contains the series of demoniac affections (*affections démoniaques*), has hardly been sketched out."

Among accounts of "demoniac affections," descriptions of objects moved without contact are of frequent occurrence. As M. Littré says, it is always the same old story. But why is it always the same old story? There were two theories before the world in 1856. First there was the "animistic hypothesis"—"spirits" move the objects, spirits raise the medium in the air, spirits are the performers of the airy music. Then there was the hypothesis of a force or fluid, or faculty, inherent in mankind, and notable in some rare examples of humanity. This force, fluid, agency, or what you will, counteracts the laws of gravitation, and compels tables, or pots, to move untouched.

To the spiritualists M. Littré says, "Bah!" To the partisans of a force or fluid he says, "Pooh!" "If your spirits are spirits, why do they let the world wag on in its old way, why do they confine themselves to trivial effects?"

The spiritualist would probably answer that he did not understand the nature and limits of spiritual powers.

To the friends of a force or faculty in our nature M. Littré remarks, in effect, "Why don't you *use* your force? Why don't you supply a new motor for locomotives? Pooh!" The answer would

be that it was not the volume and market value of the force, but the *existence* of the force, which interested the inquirer. When amber, being rubbed, attracted straws, the force was as much a force, as worthy of scientific study, as when electricity is employed to bring bad news more rapidly from the ends of the earth.

These answers are obvious: M. Littré's satire was not the weapon of science, but the familiar test of the *bourgeois* and the Philistine. Still, he admitted—nay, asserted strongly—that the whole series of "demoniac affections" was "most worthy of investigation," and was "hardly sketched out." In a similar manner, Brierre de Boismont, in his work on hallucinations, explains a number of "clairvoyant" dreams by ordinary causes. But, coming to a vision which he knew at first hand, he breaks down: "We must confess that these explanations do not satisfy us, and that these events seem rather to belong to some of the deepest mysteries of our being."<sup>1</sup> There is a point at which the explanations of common sense arouse scepticism.

Much has been done, since 1856, towards producing a finished picture, in place of an *ébauche*. The accepted belief in the phenomena of hypnotism, and of unconscious mental and bodily actions—"automatisms"—has expelled the old belief in spirits from many a dusty nook. But we still ask: "Do objects move untouched? why do they move, or, if they move not at all (as is most probable), why is it always the same story, from the Arctic Circle to the tales of witches, and of mediums?"

There is little said about this particular phenomenon (though something is said), but there is much about other marvels, equally widely rumoured of, in the brief and dim Greek records of thaumaturgy. To examine these historically is to put a touch or two on the picture of "demoniac affections" which M. Littré

<sup>1</sup> *Hallucinations*, English translation, p. 182; London, 1859.

*priori*, this could not have been known, for he must have learnt through experience that bodies are heavy, and fall when their supports are removed." Nevertheless, although Kant saw this, he still believed in the existence of *a priori* principles, which are demonstrably not less empirical. What misled him was, I think, the confusion between contingent Knowledge and contingent Truth. He declared Experience to be empirical and contingent, because our experiences could never be necessary and universal; whereas universal and necessary Truths were *a priori*, because they could not be given in particulars, and hence were *anterior* to all Experience. That they might be *posterior* to (i.e., evolved from) Experience was an alternative he omitted to consider.

With these preliminary explanations, let us now examine how far the Necessary Truths are, or are not, capable of reduction to Experience.

§ 66. It appears to me that all writers on this subject have failed to see a distinction which is so obvious when pointed out that the neglect of it seems inexplicable: the distinction is between the (objective) fact and our (subjective) knowledge of the fact. We speak of sound, sometimes meaning the undulation of the air without us, and sometimes meaning the sensation excited within us by that undulation pulsating on our tympanum. By a similar laxity, we speak of a Truth sometimes as the relations of an external fact, and sometimes as the conception we have formed of the fact. Now, in the Truths classified as Contingent, the contingency is never applicable to the relations themselves, but solely to our conceptions of them. That 72 and 140 added together will make 212 is a truth which, objectively, has no contingen-

gency whatever; but there is a subjective contingency in this as in all other unverified propositions: namely, the contingency of our miscalculating—misconceiving the objective relations. That "a body moving under certain conditions *as if* attracted by a force varying inversely as the square of the distance will describe an ellipse having the centre of attraction in one of the foci" is a proposition which, once demonstrated, has no contingency, although we may easily misconceive the relations it expresses; and that "the earth is a body acted on by such a force under such conditions" is likewise a proposition which is contingent until verified, and is necessary when verified. Assuming that there is an external world, its order must be necessary—i.e., the relations must be what they are; the contingency can only lie in the correctness or incorrectness of our appreciation of those relations. Hence, instead of confusedly speaking of Necessary and Contingent Truths, it will be less ambiguous to speak of Verified and Unverified Propositions. All truths are true, but all propositions do not correctly express the external relations, and the question arises, which propositions are to be accepted as correctly expressing the relations? Obviously those only which have been verified by the equivalence of the internal and the external order, or the reduction to  $A=A$ .

Several persons seated at a table are startled by shrill sounds, which they one and all infer to be the shrieks of a child in pain or terror. The fact that they hear the sounds is indisputable, and the expression of this fact is a truth as "necessary" as that "two parallel lines cannot enclose space." Nor is there any contingency in the fact that these sounds are produced by pulsations of the air on their tympanum. Why is there none?

desired to see executed. The Greek mystics, at least, believed that the airy music, the movements of untouched objects, the triumph over gravitation and other natural laws, for which they vouch, were caused by "demons," were "demonic affections." To compare the statements of Eusebius and Iamblichus with those of modern men of science and other modern witnesses can, therefore, only be called superfluous and superstitious by those who think M. Littré superstitious, and his desired investigation "superfluous."

When the epidemic of "spiritualism" broke out in the United States (1848-1852), students of classical literature perceived that spiritualism was no new thing, but a recrudescence of practices familiar to the ancient world. Even readers who had confined their attention to the central masterpieces of Greek literature recognised some of the revived "phenomena." The "Trance Medium," the "Inspirational Speaker," was a reproduction of the maiden with a spirit of divination, of the Delphic Pythia. In the old belief, the god dominated her, and spoke from her lips, just as the "control," or directing spirit, dominates the medium. But there were still more striking resemblances between ancient and modern thaumaturgy, which were only to be recognised by readers of the late Neo-Platonists, such as Porphyry, and of the Christian Fathers, such as Eusebius, who argued against the apologists of heathenism. The central classical writers, from Homer to Tacitus, are not superstitious; they accept the orthodox State magic of omens, of augurs, of prodigies, of oracles, but anything like private necromancy is alien and distasteful to them. We need not doubt that sorcery and the consultation of the dead were being practised all through the classical period; indeed, we know that it was so. Plato legislates against sorcery in a practical manner; whether it does harm or not, men are persuaded that it does harm; it is vain to argue with them, therefore the wizard and witch

are to be punished for their bad intentions.<sup>1</sup>

There were regular and, so to speak, orthodox oracles of the dead. They might be consulted by such as chose to sleep on tombs, or to visit the cavern of Trophonius, or other chasms which were thought to communicate with the underworld. But the idea of bringing a shade, or a hero, a demon, or a god into a private room, as in modern spiritualism, meets us late, in such works as the *Letter of Porphyry* and the *Reply of Iamblichus*, written in the fourth century of our era. If we may judge by the usual fortune of folklore, these private spiritualistic rites, without temple or State-supported priestly order, were no new things in the early centuries of Christianity; but they had not till then occupied the attention of philosophers and men of letters. The dawn of our faith was the late twilight of the ancient creeds, the classic gods were departing, belief was waning, ghosts were walking, even philosophers were seeking for a sign. The mysteries of the East had invaded Hellas.

The Egyptian theory and practice were of special importance. By certain sacramental formulae, often found written on papyrus, the gods could be constrained, and made, like mediaeval devils, the slaves of the magician. Examples will occur later. This idea was alien to the Greek mind, at least to the philosophic Greek mind. The Egyptians, like Michael Scott, had books of dread, and an old Egyptian romance turns on the evils which arose, as to William of Deloraine, from the possession of such a volume.<sup>2</sup> Half-understood strings of Hebrew, Syriac, and other "barbarous" words and incantations occur in Greek spells of the early Christian age. Again, old Hellenic magic rose from the lower strata of folklore into that of speculation. The people, the folk, is the unconscious self, as it were, of the educated and literary classes, who, in a twilight of

<sup>1</sup> *Laws*, xi.

<sup>2</sup> *Records of the Past*, iv. 134-36.

Simply because experience has found that the sensation of Sound *is* produced in this way—the objective relations have been verified. There is, however, some contingency in the proposition, “These sounds are caused by a child in terror or in pain”; not that there is the slightest contingency in the fact itself. On proceeding to the spot, the child is found to be struggling with an animal, and shrieking as it struggles. The truth of the proposition is now verified, and, unless scepticism be extended so far as to doubt whether all the phenomena are not the pageantry of a dream, we may affirm that the proposition is a necessary truth.

It may surprise the reader to see an example of this kind cited as a necessary truth, but I have selected it for the very purpose of my argument, which is to prove that the question of contingency lies solely within the region of all unverified propositions. All verified propositions are necessary truths; all unverified propositions are contingent. This is a complete reversal of the position maintained by metaphysicians, for they affirm that necessary truths are precisely those propositions which cannot be verified (*i.e.*, exhibited in Experience), and that all propositions dependent on the verification of Experience are contingent.

§ 67. Let us now take another step. The advocates of Necessity, as an indication of a source of knowledge superior to Experience, are guilty of a confusion so misleading that I am surprised at neither friend nor foe having pointed it out. It is nothing less than *changing one of the terms of the proposition*, and then concluding as if the terms had remained unaltered. Thus the one argument incessantly brought forward is that some Truths are such as are seen to be not only true, but *necessarily* true; whereas,

there are other truths which, however true to-day, are contingent, because changes may occur to-morrow which will reverse them. It is further added that no amount of experience, no number of examples, can establish necessity, but only the fact of generality, and a life-long experience of uniformity cannot exclude the possibility of a sudden reversal. All that Experience can show is that a certain order has been uniformly observed; it cannot show that what has always been must always be.<sup>1</sup> Philosophers have accepted this reasoning as if it were irresistible; every one uses it without suspicion; but no sooner do we examine it closely than we find it rests on the unconscious substitution of one premiss for another. To say that “what has occurred will occur again, will occur always,” is to say that “under precisely similar conditions precisely similar results will issue.” A is A; and A is A for evermore. But to say that “what has occurred may probably not occur again, will not occur always,” is to say that “under *dissimilar* conditions the results will not be similar.” This proposition is as absolutely true as the former; but who does not see that it is a different proposition? When we declare that the laws of Nature are not necessary truths, but only contingent truths, because the mind readily conceives the possibility of their reversal, readily imagines such a change in the external conditions as would arrest the earth’s motion, and with it all the manifold phenomena now resulting from that motion, what is it that we have declared? It is that, the relations

<sup>1</sup> “Tous les exemples qui confirment une vérité générale, de quelque nombre qu’ils soient, ne suffisent pas pour établir la nécessité universelle de cette même vérité: car il ne suit pas que ce qui est arrivé arrivera toujours de même.” —Leibnitz: *Nouveaux Essais*, preface.

creeds, are wont to listen to its promptings, and return to the old ancestral superstitions long forgotten.

The epoch of the rise of modern spiritualism was analogous to that when the classical and oriental spiritualism rose into the sphere of the educated consciousness. In both periods the marvellous "phenomena" were practically the same, and so were the perplexities, the doubts, the explanatory hypotheses, of philosophical observers. This aspect of the modern spiritualistic epidemic did not escape attention. Dr. Leonard Marsh, of the University of Vermont, published, in 1854, a treatise called *The Apocatastasis; or, Progress Backwards*. He proved that the marvels of the Foxes, of Home, and the other mediums, were the old marvels of Neo-Platonism. But he draws no conclusion, except that spiritualism is retrogressive. His book is wonderfully ill-printed; and, though he had some curious reading, his style was cumbrous, jocular, and verbose. It may, therefore, be worth while, in the light of anthropological research, to show how very closely human nature has repeated its past performances.

The new marvels were certainly not stimulated by literary knowledge of the ancient thaumaturgy. Modern spiritualism is an effort to organise and "exploit" the traditional and popular phenomena of rapping spirits and of ghosts. Belief in these had always lived an underground life in rural legend, quite unharmed by enlightenment and education. So far, it resembled the ordinary creeds of folklore. It is probable that, in addition to oral legend, there was another and more literary source of modern thaumaturgy. Books like Glanvil's, Baxter's, those of the Mathers and of Sinclair, were thumbed by the people after the literary class had forgotten them. Moreover, the Foxes, who started spiritualism, were Methodists, and may well have been familiar with "old Jeffrey," who haunted the Wesleys' house, and with some of the stories of apparitions in Wesley's *Arminian Magazine*.

If there were literary as well as legendary sources of nascent spiritualism, the sources were these. Porphyry, Iamblichus, Eusebius, and the life of Apollonius of Tyana, cannot have influenced the illiterate parents of the new thaumaturgy. This fact makes the repetition, in modern spiritualism, of Neo-Platonic theories and Neo-Platonic marvels all the more interesting and curious.

The shortest cut to knowledge of ancient spiritualism is through the letter of Porphyry to Anebo, and the reply attributed to Iamblichus. Porphyry, the disciple of Plotinus, was a seeker for truth in divine things. Prejudice, literary sentiment, and other considerations, prevented him from acquiescing in the Christian verity. The ordinary paganism shocked him, both by its obscene and undignified myths, and by many features of its ritual. He devised non-natural interpretations of its sacred legends; he looked for a visible or tangible "sign"; and he did not shrink from investigating the thaumaturgy of his age. His letter of inquiry is preserved in fragments by Eusebius and St. Augustine; Gale edited it, and, as he says, offers us an Absyrtus (the brother of Medea, who scattered his mutilated remains) rather than a Porphyry.<sup>1</sup> Not all of Porphyry's questions interest us for our present purpose. He asks, among other things: How can gods, as in the evocations of gods, be made subject to necessity, and compelled to manifest themselves?<sup>2</sup>

How do you discriminate between demons and gods that are manifest or not manifest? How does a demon differ from a hero, or from a mere soul of a dead man?

By what sign can we be sure that the manifesting agency present is that of a god, an angel, an archon, or a soul? For to boast, and to display phantasms, is common to all these varieties.<sup>3</sup>

<sup>1</sup> The references are to Parthey's edition, Berlin, 1857.

<sup>2</sup> καὶ λεγόμεναι ἀνάγκαι θεῶν, 4, 3.

<sup>3</sup> All are, for Porphyry, "phantasmogenetic agencies."

of phenomena being altered, our conceptions, to be true, must alter with them. It is that, instead of the proposition, "Such *is* the order of Nature, and such it *will be so long as it is unaltered*," we have silently substituted this proposition: "Such is *now* the order of Nature, but if *at any time it should be altered*, it will be different." The only necessity is that a thing is what it is; the only contingency is that we may be mistaken as to *what* it is. The law of gravitation, or the elliptical orbits of the planets, may, or may not, be truths; but if they *are* truths, they are necessary truths. To say that they are "observed facts, nothing more," is all that is required by Necessity; and when we add that there is no proof of the continuance of the observed order, we either deny that "A is A," or we silently change the proposition, and say "if A becomes B, it will no longer be A"; for, if the conditions continue unchanged, the order must necessarily continue unchanged; if the conditions alter, the order necessarily alters with them.

§ 68. The answer to this will probably be, That certain truths have such a character as to render their negation inconceivable, *no* alteration being conceivable in relations so absolute: and it is these truths that involve Necessity and *a priori* inspiration. This leads me to the only distinction between the truths of the two orders—namely, that in those classified as Necessary the relations are abstracted from all conditions, and considered simply in themselves; whereas in those classified as Contingent the relations are mixed with variable conditions; and it is in this variability that the contingency lies. When we say " $2 \times 2 = 4$ ," or "the internal angles of a triangle are equal to two right angles," we abstract the relations of Number and

Form from all other conditions whatever, and our propositions are true, whether the objects counted and measured be hot or cold, large or small, heavy or light, red or blue. Inasmuch as the truths express the abstract relations only, no change in the other conditions can affect these relations; and truths must always remain undisturbed *until* a change take place in their terms. Alter the number 2, or the figure triangle, by an infinitesimal degree, and the truth is thereby altered. When we say that bodies expand by heat, the proposition is a concrete one, including the variable conditions; but, although these variable conditions prevent our saying that "all bodies will, under all conditions, be always and for evermore expanded by heat," the case is not really distinguished from the former one, since both the Contingent and the Necessary Truth can only be altered by an alteration in the terms. If a body which does not expand by heat (there are such) be brought forward as impugning the truth of our proposition, we at once recognise that this body is under different conditions from those which our proposition included. This is the introduction of a new truth, not a falsification of the old. Our error, if we erred, was in too hastily assuming that all bodies were under the same conditions.

Hence the correct definition of a Contingent Truth is "one which *generalises the conditions*"; while that of a Necessary Truth is "one which is an *unconditional generalisation*." The first affirms that whatever is seen to be true, under present conditions, will be true so long as these conditions remain unaltered. The second affirms that whatever is true now, being a truth irrespective of conditions, cannot suffer any change from interfering conditions, and must therefore be universally true.

In these perplexities Porphyry resembles the anxious spiritualistic inquirer. A "materialised spirit" alleges himself to be Washington, or Franklin, or the lost wife, or friend, or child of him who seeks the mediums. How is the inquirer, how was Porphyry, to know that the assertion is correct—that it is not the mere "boasting" of some vulgar spirit? In the same way, when messages are given through a medium's mouth, or by raps, or movements of a table, or a planchette, or by automatic writing, how (even discounting imposture) is the source to be verified? How is the identity of the spirit to be established? This question of discerning spirits, of identifying them, of not taking an angel for a devil, or *vice versa*, was most important in the Middle Ages. On this turned the fate of Joan of Arc: Were her voices and visions of God or of Satan? They came, as in the cases mentioned by Iamblichus, with a light, a hallucination of brilliance. When Jean Bréhal, Grand Inquisitor of France, in 1450–1456, held the process for rehabilitating Joan, condemned as a witch in 1431, he entered learnedly into the tests of "spirit-identity."<sup>1</sup> St. Theresa was bidden to try to exorcise her visions, by the sign of the Cross. Saint or sorcerer?—it was always a delicate inquiry.

Iamblichus, in his reply to Porphyry's doubts, first enters into theology pretty deeply; but in book ii., chap. iii., he comes, as it were, to business. The nature of the spiritual agency present on any occasion may be ascertained from his manifestations or epiphanies. All these agencies show *in a light*; we are reminded inevitably of the light which accompanied the visions of Colonel Gardiner and of Pascal. Joan of Arc, too, in reply to her judges, averred that a light (*claritas*) usually accompanied the voices which came to her.<sup>2</sup> These things, if we call them hallucinations,

were, at least, hallucinations of the good and great, and must be regarded not without reverence. But modern spiritualistic and ghostly literature is full of lights which accompany "manifestations," or attend the nocturnal invasions of apparitions. Examples are so common that they can readily be found by anyone who studies Mrs. Crowe's *Night Side of Nature*, or Home's *Life*, or *Phantasms of the Living*, or the *Proceedings of the Psychical Society*. Meantime Homer and Thococritus, in familiar passages, attest this belief in light attendant on the coming of the divine; while the Norse Sagas, and the well-known tale of Sir Charles Lee's daughter and the ghost of her mother (1662), speak for the same belief in the pre-Christian North and in the society of the Restoration.<sup>1</sup> A light always comes among the Eskimo, when the tornak, or familiar spirit, visits the Angekok, or sorcerer. Here, then, is harmony enough in the psychical beliefs of all time, as when we learn that lights were flashed by the spirits who beset the late Rev. Stanton Moses.<sup>2</sup> Unluckily, while we have this cloud of witnesses to the belief in a spiritual light, we are still uncertain as to whether the seeing of such a light is a physical symptom of hallucination. This is the opinion of M. Lélut, as given in his *Amulette de Pascal* (p. 301): "This globe of fire..... is a common constituent of hallucinations of sight, and may be regarded at once as their most elementary form, and their highest degree of intensity." M. Lélut knew the phenomenon among mystics whom he had observed in his practice as an "alienist." He also quotes a story told of himself by Benvenuto Cellini. If we can admit that this hallucination of brilliant light may be produced in the conditions of a *séance*, whether modern, savage, or classical, we obtain a partial solution of the problem presented by the

<sup>1</sup> Appended to Beaumont's work on Spirits, 1705.

<sup>2</sup> See Mr. Lillie's *Modern Mystics*, and, better, Mr. Myers, in *Proceedings S. P. R.*, January, 1894.

<sup>1</sup> *Jean Bréhal* par P.P. Bélon et Balmie, Paris, s.a., p. 105.

<sup>2</sup> *Procès de Condamnation*, i. 75.

“The belief in the uniformity of nature is not a necessary truth, however constantly guaranteed by our actual experience. We are not compelled to believe that because A is ascertained to be the cause of B at a particular time, whatever may be meant by that relation, A must therefore inevitably be the cause of B on all future occasions.”<sup>1</sup> This will command the assent of every one who fails to perceive the silent change in the terms of the proposition. Instead of saying “on all *like* occasions,” which would give necessity to the proposition, Mr. Mansel renders it contingent by saying, “on all future occasions,” and the contingency lies in this, that some of the future occasions may be *unlike*, in which cases a new proposition replaces the old. “That fire will ignite paper on all occasions when the two may be brought together” is what no one but a child or a savage with limited experience would assert; but that fire will always ignite paper on all future occasions which present conditions precisely similar to those that have once caused the ignition, is a truth having the character of necessity and universality which belongs to all identical propositions, and to those only.

§ 69. It will now be an easier task to criticise the arguments which profess to show that necessity and universality are irresistible marks of an origin superior to Experience. If what has already been said has found acceptance with the reader, he will recognise that every proposition being necessarily true, if it is true at all, the only question that can arise is, *Is* the proposition true? The only answer that can decide this is one which reduces it to an identical proposition; and as this reduction is the process

of Verification, and all Verification is through Experience, the conclusion inevitably reached is one directly counter to the *a priori* hypothesis.

Two positions require to be established. First, that we gain our conceptions of Mathematical, no less than Physical, relations through Experience. Secondly, that in those conceptions so gained are involved their characters of universality and necessity.

§ 70. The argument could not indeed be conducted if we allowed Experience to be restricted to Sensation only, as the metaphysicians unwarrantably restrict it. Dr. Whewell finds no difficulty in showing that propositions “obtained by mere observation of actual facts” cannot be necessarily true; for *no* proposition whatever can be thus obtained. His definition of Experience is, “the impressions of sense and our consciousness of our thoughts.”<sup>2</sup> A far more accurate and philosophical thinker has defined its wider sense to be “co-extensive with the whole of consciousness, including all of which the mind is conscious as agent or patient, all that it does from within, as well as all that it suffers from without”; and he truly adds, “in this sense the laws of thought, as well as the phenomena of matter—in fact, all knowledge whatever, may be said to be derived from experience.”<sup>3</sup> The reader, not familiar with Kant’s or Mr. Mansel’s speculations, may, perhaps, marvel that, after so comprehensive and just a definition of Experience, Mr. Mansel escapes the conclusion he has himself pointed out as irresistible, and falls back into the *a priori* argument, restricting Experience to “its narrower and more common meaning, as limited

<sup>1</sup> Whewell: *Hist. of Scientific Ideas*, 1858, i. 131.

<sup>2</sup> Mansell: *Prolegomena Logica*, 93.

world-wide diffusion of this belief. Of course, once accepted as an element in spiritualism, a little phosphorus supplies the modern medium with a requisite of his trade.<sup>1</sup>

Returning to Iamblichus, he classifies his phantasmogenetic agencies by the *kind* of light they show; greater or less, more or less divided, more or less pure, steady or agitated (ii. 4). The arrival of demons is attended by disturbances.<sup>2</sup> Heroes are usually very noisy in their manifestations; a hero is a *Poltergeist*, "sounds echo around" (ii. 8). There are also subjective moods diversely generated by diverse apparitions; souls of the dead, for example, prompt to lust (ii. 9). On the whole, a great deal of experience is needed by the thaumaturgist, if he is to distinguish between one kind of manifestation and another. Even Inquisitors have differed in opinion.

Iamblichus next tackles the difficult question of imposition and personation by spirits. Thus a soul, or a spirit, may give itself out for a god, and exhibit the appropriate phantasmagoria: may boast and deceive (ii. 10). This is the result of some error or blunder in the ceremony of evocation.<sup>3</sup> A bad or low spirit may thus enter, disguised as a demon or god, and may utter deceitful words. But all arts, says our guide, are liable to errors, and the "sacred art"

<sup>1</sup> Origen, or whoever wrote the *Philosophoumena*, gives a recipe for producing a luminous figure on a wall. For moving lights he suggests attaching lighted tow to a bird, and letting it loose. Maury translates the passages in *La Magie*, pp. 58-59. Spiritualists, of course, will allege that the world-wide theory of spectral lights is based on fact, and that the hallucinations are not begotten by subjective conditions, but by a genuine "phantasmogenetic agency." Two men of science, Baron Schrenk-Notzing and Dr. Gibotteau, vouch for illusions of light accompanying attempts by *living* agents to transfer a hallucinatory vision of themselves to persons at a distance (*Journal S. P. R.*, iii. 307; *Proceedings*, viii. 476). It will be asserted by spiritualists that disembodied agencies produce the same effect in a higher degree.

<sup>2</sup> θορυβώθη μὲν φερόμενα τὰ ἔνικα.

<sup>3</sup> ἡγίκα δὲ ἀμάρτυρά τι συμβάνη περὶ τὴν θεουργικὴν τέχνην.

must not be judged by its occasional imperfections. We know the same kind of excuses in modern times.

Porphyry went on to ask questions about divination and clairvoyance. We often ascertain the future, he says, in dreams, when our bodies are lying still and peaceful: when we are in no convulsive ecstasy such as diviners use. Many persons prophesy "in enthusiastic and divinely seized moments, awake, in a sense, yet not in their habitual state of consciousness." Music of certain kinds, the water of certain holy wells, the vapours of Branchidae, produce such ecstatic effects. Some "take darkness for an ally" (dark *séances*), some see visions in water, others on a wall, others in sun or moon. As an example of ancient visions in water, we may take one from the life of Isidorus, by Damascius. Isidorus and his biographer were acquainted with women who beheld in pure water in a glass vessel the phantasms of future events.<sup>1</sup> This form of divination is still practised, though crystal balls are more commonly used than decanters of water. Ancient and modern superstition, as in the familiar case of Dr. Dee, attributes the phantasms to spiritual agency.

Is a divine being *compelled*, Porphyry asks, to aid in these efforts, or is it only the soul of the seer, as some believe, which hallucinates itself, by the aid of *points de repère*?<sup>2</sup> Or is there a blending of the soul's operations with the divine inspiration? Or are demons in some way evolved out of something abstracted from living bodies? He seems to hint at some such theory of "exuvious fumes" from the "circle" as more recent inquirers have imagined. The young appear to be peculiarly sensitive to vapours, invocations, and other magical methods which affect the human constitution, and the young are usually engaged as seers. Hence visions are probably subjective. Ecstasy, madness,

<sup>1</sup> Damascius, *ap. Photium.*

<sup>2</sup> πάθη ἐκ μικρῶν αἰθνυμάτων ἐγειρόνεται.

to the results of sensation and perception only." The explanation is that Mr. Mansel adopts the Kantian conception of Forms of Thought, as conditions of Experience, a conception I have attempted to refute. (Vol. ii., pp. 475 sq.) One passage is all that need be given :—

"That experience," says Mr. Mansel, "is the chronological antecedent of all our knowledge, even of the most necessary truths, is now generally admitted. But a distinction is frequently drawn between truths or notions of which experience is the *source* and those of which it is only the *occasion*. . . . . Every general concept is in one sense empirical; for every concept must be formed from an intuition, and every intuition is experienced. But there are some intuitions which, from our constitution and position in the world, we cannot help experiencing, and there are others which, according to circumstances, we may experience or not. The former will give rise to concepts which, without any great impropriety of language, may be called *native* or *à priori*; being such as *though not coeval with the mind itself* [an important admission] will certainly be formed in every man as he grows up, and such as it was pre-ordained that every man should have. The latter will give rise to concepts which, for a like reason, may be called *adventitious* or *à posteriori*; being such as may or may not be formed according to the special experience of this or that individual."<sup>1</sup>

Inasmuch as I throughout interpret Experience according to the wider definition given by Mr. Mansel, and only differ from him in regarding the Forms of Thought as evolved through Experience, both in the race and the indivi-

dual, whereas he (confounding, I think, Anatomy with Morphology) regards the Forms as conditions of experience, it will be needless to criticise his defence of Necessary Truths, having an *à priori* source, because the arguments I have urged against Kant are the arguments I should urge against Mr. Mansel.

§ 71. We may thus securely lay down the proposition that whatever can be learned must be learned by and through Experience; and we have then to examine whether we learn Necessary Truths, or bring them with us into the world as the heritage of a higher life.

That two parallel lines can never meet is a Necessary Truth. That is to say, it necessarily follows from the definition of a straight line. To call it, however, an *à priori* truth, a truth independent of Experience, is a very imperfect analysis of the mind's operations. An attempt is made to prove that the idea could never have been gained through Experience, because it commands universal assent, and because Experience itself could never give it necessity. Dr. Whewell's argument is that, let us follow two parallel lines out as far as we can, we are still unable to follow them to infinity; and, for all our experience can tell us to the contrary, these lines may possibly begin to approach immediately beyond the farthest point to which we have followed them, and so finally meet. Now, what ground have we for believing that this possibility is not the fact? In other words, how do we know the axiom to be absolutely true? Clearly *not* from Experience, says Dr. Whewell, following Kant.\*

We answer, Yes; clearly *from* Experience. For our experience of two parallel lines is precisely this: they do not enclose space. Dr. Whewell says that, for all our experience can tell us to

\* *Op. cit.*, p. 170.

fasts, and vigils seem particularly favourable to divination. Or are there certain mystic correspondences in the nature of things, which may be detected? Thus stones and herbs are used in evocations ; "sacred bonds" are tied (as in the Eskimo hypnotism and in Australia); closed doors are opened, the heavenly bodies are observed. Some suppose that there is a race of false and counterfeiting spirits, which, indeed, Iamblichus admits. These act the parts of gods, demons, and souls of the dead. Again, the conjurer plays on our expectant attention. Omitting some remarks no longer appropriate, Porphyry asks what use there is in chanting barbarous and meaningless words. He is inclined to think that the demon, or guardian spirit of each man, is only part of his soul—in fact, his "subliminal self." And, generally, he suspects that the whole affair is "a mere imaginative deceit, played off on itself by the soul."

Replying as to divination, Iamblichus says that the right kind of dreams are between sleeping and waking, when we hear a voice giving directions. A modern example occurred in the trial of the Assynt murderer in 1831. One Kenneth Fraser, called "the dreamer," said in the trial : "I was at home when I had the dream. It was said to me in my sleep by a voice like a man's voice, that the pack (of the murdered pedlar) was lying in sight of the place. I got a sight of the place just as if I had been awake. I never saw the place before, but the voice said in Gaelic, 'the pack of the merchant is lying in a cairn of stones, in a hollow near to their house.' The voice did not name Macleod's house." The pack was, however, not found there, but in a place hard by, which Kenneth had not seen in his dream. Oddly enough, the murderer had originally hidden the pack, or some of its contents, in a cairn of stones, but later removed it. In the "willing game," as played by Mr. Stuart Cumberland, the seeker usually goes first to the place where the hider had thought of concealing the object, though later he

changes his mind. Macleod was hanged; he confessed his guilt.<sup>1</sup>

Iamblichus believed in dreams of this kind, and in voices heard by men wide awake, as in the case of Joan of Arc. When an invisible spirit is present, he makes a whirring noise, like the Cock Lane Ghost!<sup>2</sup> Lights also are exhibited; the medium then by some mystic sense knows what the spirit means. The soul has two lives—one animal, one intellectual; in sleep the latter is more free, and more clairvoyant. In trance, or somnambulism, many cannot feel pain even if they are burned; the god within does not let fire harm them (iii. 4). This, of course, suggests Home's experiments in handling live coals, as Mr. Crookes and Lord Crawford describe them. Compare the Berserk "coal-biters" in the saga of Egil, and the Huron coal-biter in the preceding essay. "They do not then live an animal life." Sword points do not hurt them. Their actions are no longer human. "Inaccessible places are accessible to them, when thus borne by the gods; and they tread on fire unharmed; they walk across rivers.....They are not themselves, they live a diviner life, with which they are inspired, and by which they are possessed." Some are convulsed in one way, some in another, some are still. Harmonies are heard (as in Home's case and that of Mr. Stainton Moses). Their bodies are elongated (like Home's), or broadened, or float in mid-air, as in a hundred tales of mediums and saints. Sometimes the medium sees a light when the spirit takes possession of him, sometimes all present see it (iii. 6). Thus Wodrow says (as we have already shown) that Mrs. Carlyle's ancestor, Mr. Welsh, shone in a light as he meditated; and Patrick Walker tells the same tale about

<sup>1</sup> *Life of Hugh Macleod* (Noble, Inverness). As an example of the growth of myth, see the version of these facts in *Fraser's Magazine* for 1856. Even in a sermon preached immediately after the event, it was said that the dreamer *found* the pack by revelation of his dream!

<sup>2</sup> iii. 2. *ποιγούτρον ἐν τῷ εἰσεναι.*

the contrary, the lines may possibly begin to approach each other at some distant point; and he would correct this imperfect experience by *a priori* truth. The case is precisely the reverse. The tendency of the mind unquestionably is to fancy that the two lines *will* meet at some point; it is enlarged experience which corrects this tendency. There are many analogies in nature to suggest the meeting of the two lines. It is only our reflective experience which can furnish us with the proof which Dr. Whewell refers to ideas independent of all Experience. What proof have we that two parallel lines cannot enclose space? Why this: as soon as they *assume the property of enclosing space, they lose the property of parallelism*: they are no longer *straight lines*, but *bent lines*. In carrying out imaginatively the two parallel lines into infinity, we have a tendency to make them approach; we can only correct this by a recurrence to our experience of parallel lines; we must call up a distinct image of a parallel, and then we see that two such lines cannot enclose space.

'The whole difficulty lies in the clearness or obscurity with which the mind makes present to itself past experience. "Refrain from rendering your terms into **ideas**," says Herbert Spencer, "and you may reach any conclusion whatever. 'The whole is equal to its part' is a proposition that may be quite comfortably entertained so long as neither wholes nor parts are imagined."<sup>1</sup> But no sooner do we make present to our minds the meaning of parallel lines than in that very act we make present the impossibility of their meeting, and only as the idea of these lines becomes wavering does the idea of

their meeting become possible. A is no longer A, but B.

"Necessary truths," says Dr. Whewell, "are those in which we not only learn that the proposition *is* true, but see that it *must* be true; in which the negation is not only false, but impossible; in which we cannot, even by an effort of the imagination, or in a supposition, conceive the reverse of that which *is* asserted. That there are such truths cannot be doubted. We may take, for example, all relations of Number. Three and two make five. We cannot conceive it otherwise. We cannot, by any freak of thought, imagine three and two to make seven."

That Dr. Whewell cannot, by any freak of thought, *now* imagine three and two to make seven is very likely; but that he could *never* imagine this is untrue. If he had been asked the question before he had learned to reckon, he would have imagined seven quite as easily as five: that is to say, he would *not* have known the relation of three and two. Children have no intuitions of numbers: they learn them as they learn other things. "The apples and the marbles," says Herschel, "are put in requisition, and through the multitude of gingerbread-nuts their ideas acquire clearness, precision, and generality." But though, from its simplicity, the calculation of three added to two is with a grown man an instantaneous act, yet if you ask him suddenly how many are twice 365, he cannot answer till he has reckoned. He might certainly, by a very easy "freak of thought" (*i.e.*, by an erroneous calculation), imagine the sum-total to be 720; and although, when he repeats his calculation, he may discover the error, and declare 730 to be the sum-total, and say, "It is a Necessary Truth that 365 added to 365 make 730," we

<sup>1</sup> *Principles of Psychology*, p. 49.

two of the fanatics called "Sweet Singers."

From all this it follows, Iamblichus holds, that spiritual possession is a genuine objective fact, and that the mediums act under real spiritual control. Omitting local oracles, and practices apparently analogous to the use of the planchette, Iamblichus regards the heavenly *light* as the great source of, and evidence for, the *external* and spiritual character and cause of divination (iii. 14). Iamblichus entirely rejects all Porphyry's psychological theories of hallucinations, of the demon or "genius" as "subliminal self," and asserts the actual, objective, sensible action of spirits, divine or daemonic. What effect Iamblichus produced on the inquiring Porphyry is uncertain. In his *De Abstinencia* (ii. 39) he gives in to the notion of deceitful spirits.

In addition to the evidence of Porphyry, Iamblichus, Eusebius, and other authors of the fourth century, some recently published papyri of the same period throw a little light on the late Greek thaumaturgy.<sup>1</sup> Thus Papyrus cxxv. *verso* (about the fifth century) "contains elaborate instructions for a magical process, the effect of which is to evoke a goddess, to transform her into the appearance of an old woman, and to bind to her the service of the person using the spell....."

Obviously we would much prefer a spell for turning an old woman into a goddess. The document is headed, *γραῦς Απολλοῦ Τυανεως υπηρετος*, "the old serving-woman of Apollonius of Tyana," and it ends, *η πρᾶξις δεδοκιμασται*, "it is proved by practice."

You take the head of an ibis, and write certain characters on it in the blood of a black ram, and go to a cross-road, or the sea-shore, or a river-bank, at midnight; there you recite gibberish, and then see a pretty lady riding a donkey, and she will put off her beauty

like a mask, and assume the appearance of old age, and will promise to obey you—and so forth.

Here is a "constraint put on a god," as Porphyry complains. Reginald Scot, in his *Discovery of Witchcraft* (1584), has a very similar spell for alluring an airy sylph, and making her serve and be the mistress of the wizard! There is another papyrus (xlvi.), of the fourth century, with directions for divination by aid of a boy looking into a bowl, says the editor (p. 64). There is a long invocation full of "barbarous words," like the mediæval nonsense rhymes used in magic. There is a dubious reading, *βαθρον* or *βοθρον*; it is suggested that the boy is put into a pit, as it seems was occasionally done.<sup>2</sup> It is clear that a spirit is supposed to show the boy his visions. A spell follows for summoning a visible deity. Then we have a recipe for making a ring which will enable the owner to know the thoughts of men. The god is threatened if he does not serve the magicians. All manner of fumigations, plants, and stones are used in these idiotic ceremonies, and to these Porphyry refers. The papyri do not illustrate the phenomena described by Iamblichus, such as the "light," levitation, music of unknown origin, the resistance of the medium to fire and sword-points, and all the rest of his list of prodigies. Iamblichus probably looked down on the believers in these spells written on papyri with extreme disdain. They are only interesting as folklore, like the rhymes of incantation preserved in Reginald Scot's *Discovery of Witchcraft*.

There were other analogies between modern, ancient, and savage spiritualism. The medium was swathed, or tied up, like the Davenport Brothers, like Eskimo and Australian conjurers, like the Highland seer in the bull's hide.<sup>2</sup> The

<sup>1</sup> See notice in *Classical Review*, February, 1894.

<sup>2</sup> See oracles in Eusebius, *Praep. Evang.*, v. 9. The medium was tied up in some way; he had to be unloosed and raised from the ground.

should not in the least dispute the necessity of the truth, but presume that he had arrived at it through experience—namely, through his knowledge of the relations of numbers, a knowledge which he remembers to have laboriously acquired when a boy at school.

Dr. Whewell maintains that whereas Contingent Truths are seen to be true only by observation, and could not beforehand have been detected, Necessary Truths are “seen to be true by a pure act of thought.” But he overlooks the fact that even the simple truths of Number are not seen to be true *before* these relations have been exhibited; and if they are afterwards seen to be true by a pure act of thought, not less so are physical truths, once demonstrated, seen by a pure act of thought: neither can be seen beforehand. He declares that we cannot distinctly, although we may indistinctly, conceive the contrary of a Necessary Truth. Here again the oversight is the same. We cannot conceive the contrary of a truth *after* its necessity has been demonstrated, but we can distinctly conceive that  $17+9=25$  *before* verification. So little does he apprehend the real case that, referring to the mistakes of children and savages, he winds up with the serene remark, “But I suppose no persons would, on such grounds, hold that these arithmetical truths are truths known only by experience.”

§ 72. Let us now turn to another argument. Kant says: “Experience, no doubt, teaches us that this or that object is constituted in such and such a manner, but not that it could not possibly exist otherwise.” “Empirical universality is only an arbitrary extension of the validity from that which may be predicated of a proposition valid in most cases

to that which is asserted of a proposition which holds good in all. When, on the contrary, strict universality characterises a judgment, it necessarily indicates another peculiar source of knowledge—namely, a faculty of cognition *a priori*. Necessity and strict universality, therefore, are infallible tests for distinguishing pure from empirical knowledge, and are inseparably connected with each other.”<sup>1</sup> And elsewhere: “If we thought to free ourselves from the labour of these investigations by saying, ‘Experience is constantly offering us examples of the relation of cause and effect in phenomena, and presents us with abundant opportunity of abstracting the conception of cause, and so at the same time of corroborating the objective validity of this conception’—we should in this case be overlooking the fact that the conception of cause cannot arise in this way at all; that, on the contrary, it must either have a basis in the Understanding or be rejected as a mere chimera. For this conception demands that something (A) should be of such a nature that something else (B) should follow from it necessarily, and according to an absolutely universal law. We may certainly collect from phenomena a law, according to which this or that *usually* happens; but the element of necessity is not to be found in it. Hence it is evident that to the synthesis of cause and effect belongs a dignity which is utterly wanting in any empirical synthesis.”<sup>2</sup>

§ 73. I answer that the very fact of our being compelled to judge of the unknown by the known—of our irresistibly anticipating the future to resemble the past—

<sup>1</sup> Kant: *Kritik: Einleitung*, § ii. (Micklejohn's translation, p. 3).

<sup>2</sup> *Op. cit. Transcendental Logik*, § 9 (Transl., p. 76).

medium was understood to be a mere instrument, like a flute, through which the "control," the god or spirit, spoke.<sup>1</sup> This is still the spiritualistic explanation of automatic speech. Eusebius goes so far as to believe that "earthbound spirits" do speak through the medium, but a much simpler theory is obvious.<sup>2</sup> Indeed, where automatic performances of any sort—by writing, by the kind of "Ouija" or table pointing to letters, as described by Ammianus Marcellinus (xxix. 29), or by speaking—are concerned, we have the aid of psychology and the theory of "unconscious cerebration" to help us. But when we are told the old tales of whirring noises, of "biloccation," of "levitation," of a mystic light, we are in contact with more difficult questions.

In brief, the problem of spiritualism in general presents itself to us thus: in ancient, modern, and savage thaumaturgy there are certain automatic phenomena. The conjurer, priest, or medium acts, or pretends to act, in various ways beyond his normal consciousness. Savages, ancient mystics, and spiritualists ascribe his automatic behaviour to the control of spirits, gods, or demons. No such hypothesis is needed.

On the other side, however, are phenomena not automatic—"spiritual" lights and sounds; interferences with natural laws, as when bodies are lifted in the air, or are elongated, when fire does not fasten on them, and so on. These phenomena, in ancient times, followed on the performance of certain mystic rites. They are now said to occur without the aid of any such rites. Gods and spirits are said to cause them;

The inspiring agency, in a hurry to be gone, gave directions for the unbinding. παίεο δὴ πρόφρων δάρων, ἀνάπανε δὲ φῶτα ράμνων ἐκλύων πολιὸν τύπον, ἥδ' ἀπὸ γυιών Νειλών θόηγην χεριὸν στιβαράς ἀπαελπ. The binding of the Highland seer in a bull's hide is described by Scott in the *Lady of the Lake*. A modern Highland seer has ensconced himself in a boiler! The purpose is to concentrate the "force."

<sup>1</sup> *Praep. Evang.*, v. 8.

<sup>2</sup> *Ibid.*, v. 15, 3.

but they are only attained in the presence of certain exceptional persons—mediums, saints, priests, conjurers. Clearly, then, not the rites, but the peculiar constitution of these individuals, is the cause (setting imposture aside) of the phenomena, of the hallucinations, of the impressions, or whatever they are to be styled. That is to say, witnesses, in other matters credible, aver that they receive these peculiar impressions in the society of certain persons, and not in that of people in general. Now, these impressions are everywhere, in every age and stage of civilisation, essentially identical. Is it stretching probability almost beyond what it will bear to allege that all the phenomena, in the Arctic Circle as in Australia, in ancient Alexandria as in modern London, are always the result of an imposture modelled on savage ideas of the supernatural?

If so, we are reduced to the choice between actual objective facts of unknown origin (frequently counterfeited, of course), and the theory—which really comes to much the same thing—of identical and collective hallucinations in given conditions. On either hypothesis the topic is certainly not without interest for the student of human nature. Even if we could, at most, establish the fact that people like Iamblichus, Sir W. Crookes, Lord Crawford, Jesuits in Canada, professional conjurers in Zululand, Spaniards in early Peru, Australian blacks, Maoris, Eskimo, cardinals, ambassadors, are similarly hallucinated, as they declare, in the presence of priests, diviners, Home, Zulu magicians, Biraarks, Jossakeeds, *angakut*, *tohungas*, and saints, and Mr. Stanton Moses, still the identity of the false impressions is a topic for psychological study. Or, if we disbelieve this cloud of witnesses, if they voluntarily fabled, we ask, why do they all fable in exactly the same fashion? Even setting aside the animistic hypothesis, the subject is full of curious neglected problems.

Once more, if we admit the theory of

of our incapacity to believe that similar effects will not always follow similar causes—this fact is a proof that we have no Ideas except such as are acquired through Experience, and that uniformity in Experience irresistibly determines our conceptions of the future. For if we had *a priori* ideas, these ideas, being superior to Experience, would not always inevitably conform to it; they would bring another standard by which to judge—a standard which was not that of the already known. Have we such a standard?

§ 74. The school of *a priori* philosophers maintain that we have, and that the standard is the Necessity and Universality which certain truths involve, and which cannot be given in Experience. But we have had abundant evidence that every truth is necessarily true, and the fallacy is, that of first using a proposition in one sense, and then concluding from it in a different sense. It is not Truth which is contingent, but conditions which are variable, and every truth becomes invariable so long as the conditions do not vary. The same argument proves universality. If a truth simply express an unconditional generalisation—if it express an abstract relation, of course it is true for ever without possibility of change. In both cases we say A is A, and will be A for ever. When Kant says Experience cannot be universal, but only general, and cannot therefore bestow universality, because it cannot itself be universal, he forgets that Experience itself is no more general than it is universal—it is particular, and *repeated*. Now, just as a finite line may be produced to infinity although the mind is finite, just as zero may be added to zero, and space to space, without end, by the

simple process of repetition, so may a truth, "A is A," though particular in itself, be transformed into an universal.

I close here the discussion of one of the most important topics in the whole range of Metaphysics, and with it these Prolegomena.

When we enter on the scene of History, we see men nobly striving to grapple with the Unknowable. The shadow of the unknown world everywhere mingles with the light of day. It is the dark background on which Phenomena are visible. It is always present, and always limiting—as shadows limit—the objects of our thought. Beyond the Known stretches the vague Mystery, into which our eyes peer vainly, yet persistently. The border-land is ill-defined, and it is so because the sphere of the Known is always becoming larger and larger. We always hope that the Unknown is not also the Unknowable.

Hence Speculation is tempted to enter the realm of shadows, and will not admit the obvious fact that, on quitting *terra firma*, it abuts on vacancy, and peoples an airy void with airy nothings. Psychology has to check this groping amid shadows, by showing that the coast-line of the Knowable is sharply defined from the ocean of the Unknowable by the necessary limitation of human faculties. Between us and that ocean there stretches a vast and fertile region, where golden harvests have already been reaped, and where still richer harvests await the sickle—truths already gathered for the regulation of our Life, and wider truths which will hereafter be gathered for its renovation.

intentional imposture by saints, *angakut*, Zulu medicine-men, mediums, and the rest, we must grant that a trick which takes in a professional conjurer, like Mr. Kellar, is a trick well worthy of examination. How did his Zulu learn the method of Home, of the Egyptian diviners, of St. Joseph of Cupertino?<sup>1</sup> Each solution has its difficulties, while practical investigation is rarely possible. We have no Home with us, at present, and the opportunity of studying his effects carefully was neglected. It was equally desirable to study them whether he caused collective hallucinations, or whether his effects were merely those of ordinary, though skilful, conjuring. For Home, whatever his moral character may have been, was a remarkable survival of a class of men familiar to the mystic Iamblichus, to the savage races of the past and present, and (as far as his marvels went) to the biographers of the saints. "I am one of those," says the Zulu medicine-man, in Mr. Rider Haggard's *Allan's Wife*, "who can make men see what they do not see." The class of persons who are said to have possessed this power appear, now and then, in all human history, and have at least bequeathed to us a puzzle in anthropology. This problem has recently been presented, in what may be called an acute form, by the publication of the *Experiences of Mr. Stainton Moses*.<sup>2</sup> Mr. Moses was a clergyman and schoolmaster; in both capacities he appears to have been industrious, conscientious, and honourable. He was not devoid of literature, and had contributed, it is said, to periodicals as remote from mysticism as *Punch* and the *Saturday Review*. He was a sportsman—at least he was a disciple of our

father, Izaak Walton. "Most anglers are quiet men and followers of peace, so simply wise as not to sell their consciences to buy riches, and with them vexation, and a fear to die," says Izaak.

In early middle age, about 1874, Mr. Moses began to read such books as Dale Owen's, and to sit "attentive of his trembling" table, by way of experiment. He soon found that tables bounded in his presence, untouched. Then he developed into a regular "medium." Inanimate objects came to him through stone walls. Scent of all sorts, and, as in the case of St. Joseph of Cupertino, of an unknown sort, was scattered on people in his company. He floated in the air. He wrote "automatically." Knocks resounded in his neighbourhood, in the open air. "Lights" of all varieties hovered in his vicinity. He spoke "automatically," being the mouthpiece of a "spirit"; and very dull were the spirit's sermons. After a struggle he believed in "spirits," who twanged musical notes out in his presence. He became editor of a journal named *Light*; he joined the Psychical Society, but left it when the society pushed materialism so far as to demonstrate that certain professional mediums were convicted swindlers.

The evidence for his marvels is the testimony of a family, perfectly respectable, named Speer, and of a few other witnesses whom nobody can suspect of conscious inaccuracy. There remain, as documents, his books, his MS. notes, and other corroborative notes kept by his friend Dr. Speer, a sceptic, and other observers.

It is admitted that Mr. Moses was not a cautious logician; his inferences are problematic, his generalisations hasty. As to the facts, it is equally difficult to believe in them, and to believe that Mr. Moses was a conscious impostor, and his friends easy dupes. He cannot have been an impostor *unconsciously* in a hypnotic state, in a "trance," because

<sup>1</sup> Dr. Hodgson, in *Proceedings S. P. R.*, January, 1894, makes Mr. Kellar's evidence as to Indian "levitation" seem far from convincing! As a professional conjurer, and exposer of spiritualistic imposture, Mr. Kellar has made statements about his own experiences which are not easily to be harmonised.

<sup>2</sup> *Proceedings S. P. R.*, January, 1894.

## APHORISMS AND REFLECTIONS

his effects could not have been improvised. If they were done by jugglery, they required elaborate preparations of all sorts, which must have been made in

Iamblichus to his mystics, by the Church to her saints, by witnesses to the "possessed," by savages to medicine-men, and by Mr. Crookes and Lord Crawford

Alleged "spiritual phenomena," ancient and modern.						
Rev. Stainton Moses						
D. D. Home	+	+	+			
Iamblichus	+	+	+			
St. Joseph of Cupertino						
Eskimo	+	+	+			
Australian	+	+	+			
"Spontaneous" (Glanvil, Bovet, Telfair, Kirk)	+	+	+			
The "object" being the medium in some cases.						
	x	?		x	x	"Intelligent Raps."
	x		x	x	x	"Movement of objects untouched."
	x	x	x	x	x	"Levitation" (floating in air of scer.).
	x		x	x	x	Disappearance and re-appearance of objects.
				x	x	Passage of matter through matter.
				x	x	Direct writing. That is, not by any detected human agency.
				x	x	Sounds made on instruments supernormally.
	x		x	x	x	Direct sounds. That is, by no detected human agency.
			x	x	x	Scents.
	x	x	x	x	x	Lights.
			x	x	x	Objects "materialised."
	x		x	x		Hands materialised, touched or seen.

full ordinary consciousness. If we fall back on collective hallucination, then that hallucination is something of world-wide diffusion, ancient and continuous, for the effects are those attributed by

to D. D. Home. Of course, we may be told that all lookers-on, from Eskimo to Neo-Platonists and men of science, know what to expect, and are hallucinated by their own expectant attention. But



when they expect nothing, and are disappointed by having to witness prodigies, the same old prodigies, what is the explanation?

The tabular statement on page 95, altered from that given by Mr. Myers in his publication of Mr. Moses and Dr. Speer's MS. notes, will show the historical identity of the phenomena. Mr. Moses was the agent in all; those exhibited by other ancient and modern agents are marked with a cross.

There are here twelve miracles! Home and Iamblichus add to Mr. Moses's *répertoire* the alteration of the medium's height or bulk. This feat still leaves Mr. Moses "one up," as regards Home, in whose presence objects did not disappear, nor did they pass through stone walls. The questions are, to account for the continuity of collective hallucinations, if we accept that hypothesis, and to explain the procedure of Mr. Moses, if he were an impostor. He did not exhibit before more than seven or eight private friends, and he gained neither money nor dazzling social success by his performances.

This page in the chapter of "demoniac affections" is thus still in the state of *ébauche*. Mr. Moses believed his experi-

ences to be "demoniac affections," in the Neo-Platonic sense. Could his phenomena have been investigated by the Archbishop of Canterbury, Dr. Parker, Messrs. Maskelyne and Cook, and Professor Huxley, the public mind might have arrived at some conclusion on the subject. But Mr. Moses's chief spirit, known in society as "Imperator," declined to let strangers look on. He testified his indignation in a manner so *bruyant*, he so banged on tables, that Mr. Moses and his friends thought it wiser to avoid an altercation.

This exclusiveness of "Imperator" certainly *donne furieusement à penser*. If spirits are spirits, they may just as well take it for understood that performances "done in a corner" are of no scientific value. But we are still at a loss for a "round" and satisfactory hypothesis which will colligate all the alleged facts, and explain their historical continuity. We merely state that continuity as a historical fact. Marvels of savages, Neo-Platonists, saints of Church or Covenant, "spontaneous" phenomena, mediumistic phenomena, all hang together in some ways. Of this the Church has her own explanation.

## XI.

### CRYSTAL-GAZING

THE savage, like other people, wants to discover things distant in space, or unborn in time. For such purposes he has sought out many inventions; has his mediums inspired by ghosts, his methods of divination, his clairvoyants, and his "crystal-gazers." There are many modes of gazing. We find the habit of looking

into water, usually in a vessel, preferably a glass vessel, among Red Indians (*Léjeune*), Romans (Varro, cited in *Civitas Dei*, iii. 457), Africans of Fez (*Leo Africanus*); while Maoris use a drop of blood (Taylor), Egyptians use ink (Lane), and Australian savages employ a ball of polished stone, into which the seer "puts

# APHORISMS AND REFLECTIONS

FROM THE WORKS OF

T. H. HUXLEY

SELECTED BY

HENRIETTA A. HUXLEY

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himself" to descry the results of an expedition.<sup>1</sup>

We know Ellis's record of the Polynesian case. A hole being dug in the floor of his house and filled with water, the priest looks in it for a vision of the thief who has carried off stolen goods. The Polynesian theory is that the god carries the spirit of the thief over the water, in which it is reflected. Lejeune's Red Indians make their patients gaze into the water, in which they will see the pictures of the things in the way of food or medicine that will do them good. In modern language, the instinctive knowledge existing implicitly in the patient's sub-consciousness is thus brought into the range of his ordinary consciousness.

In 1887 the late Captain J. T. Bourke, of the U.S. Cavalry, an original and careful observer, visited the Apaches in the interests of the Ethnological Bureau. He learned that one of the chief duties of the medicine-men was to find out the whereabouts of lost or stolen property. Na-a-cha, one of these *jossakeeds*, possessed a magic quartz crystal, which he greatly valued. Captain Bourke presented him with a still finer crystal. "He could not give me an explanation of its magical use, except that by looking into it he could see everything he wanted to see." Captain Bourke appears never to have heard of the modern experiments in crystal-gazing. He also discovered that the Apaches, like the Greeks, Australians, Africans, Maoris, and many other races, use the bull-roarer, turndun, or *rhombos*—a piece of wood which, being whirled round, causes a strange, windy roar—in their mystic ceremonies. The wide use of the *rhombos* was known to Captain Bourke; that of the crystal was not.

For the Iroquois Mrs. Erminie Smith supplies information about the crystal. "Placed in a gourd of water, it could

render visible the apparition of a person who has bewitched another." She gives a case in European times of a medicine-man who found the witch's habitat, but got only an indistinct view of her face. On a second trial he was successful.<sup>2</sup> One may add that treasure-seekers among the Huille-che "look earnestly" for what they want to find "into a smooth slab of black stone, which I suppose to be basalt."<sup>3</sup>

The kindness of Monsieur Lefébure enables me to give another example from Madagascar.<sup>4</sup> Flacourt, describing the Malagasy, says that they *squillent* (a word not in Littré)—that is, divine by crystals, which "fall from heaven when it thunders." Of course, the rain reveals the crystals, as it does the flint instruments called "thunder-bolts" in many countries. "Lorsqu'ils squillent, ils ont une de ces pierres au coing de leurs tablettes, disans qu'elle a la vertu de faire operation à la figure de geomance." Probably they used the crystals as do the Apaches. On July 15th a Malagasy woman viewed, whether in her crystal or otherwise, two French vessels which, like the Spanish fleet, were "not in sight"; also officers, and doctors, and others aboard, whom she had seen, before their return to France, in Madagascar. The earliest of the ships did not arrive till August 11th.

Dr. Callaway gives the Zulu practice, where the chief "sees what will happen by looking into the vessel."<sup>5</sup> The Shamans of Siberia and Eastern Russia employ the same method.<sup>6</sup> The case of the Inca Yupanqui is very curious.

<sup>1</sup> Report Ethnol. Bureau, 1887-88, p. 460; vol. ii., p. 69. Captain Bourke's volume on *The Medicine Men of the Apaches* may also be consulted.

<sup>2</sup> Fitzroy, *Adventurer*, vol. ii., p. 389.

<sup>3</sup> *L'Histoire de la grande île Madagascar*, par le Sieur de Flacourt, Paris, 1661, ch. 76. *Vue de deux Navires de France predite par les Negres*, avant que l'on en peust scâvoir des Nouvelles, etc.

<sup>4</sup> *Religion of the Amazulu*, p. 341.

<sup>5</sup> *J. A. I.*, November, 1895, p. 155. Rychov is cited; *Zhurnal*, p. 86.

<sup>6</sup> Information, with a photograph of the stones, from a correspondent in West Maitland, Australia. Also Mrs. Langloh Parker, in *The Euahlayi Tribe*.



"As he came up to a fountain he saw a piece of crystal fall into it, within which he beheld a figure of an Indian in the following shape.....The apparition then vanished, while the crystal remained. The Inca took care of it, and they say that he afterwards saw everything he wanted in it."<sup>1</sup>

Here, then, we find the belief that hallucinations can be induced by one or other form of crystal-gazing, in ancient Peru, on the other side of the continent among the Huilc-che, in Fez, in Madagascar, in Siberia, among Apaches, Hurons, Iroquois, Australian black fellows, Maoris, and in Polynesia. This is assuredly a wide range of geographical distribution. We also find the practice in Greece (Pausanias, VII., xxi. 12), in Rome (Varro), in Egypt, and in India.

Though anthropologists have paid no attention to the subject, it was, of course, familiar to later Europe. "Miss X." has traced it among early Christians, in early Councils, in episcopal condemnations of *specularii*, and so to Dr. Dee, under James VI.; Aubrey; the Regent d'Orléans in St. Simon's *Memoirs*; the modern mesmerists (Gregory, Mayo) and the mid-Victorian spiritualists, who, as usual, explained the phenomena, in their prehistoric way, by "spirits."<sup>2</sup> Till this lady examined the subject, nobody had thought of remarking that a belief so universal had probably some basis of facts, or nobody if we except two professors of chemistry and physiology, Drs. Gregory and Mayo. Miss X. made experiments, beginning by accident, like George Sand, when a child.

The hallucinations which appear to her eyes in ink, or crystal, are :

1. Revived memories "arising thus, and thus only, from the sub-conscious strata";

"2. Objectivation of ideas or images—(a) consciously or (b) unconsciously—in the mind of the percipient;

<sup>1</sup> *Rites and Laws of the Yncas*, Christoval de Molina, p. 12.

<sup>2</sup> See Miss X.'s article, S.P.R. *Proceedings*, v. 486.

"3. Visions, possibly telepathic or clairvoyant, implying acquirement of knowledge by supernormal means."<sup>1</sup>

The examples given of the last class, the class which would be so useful to a priest or medicine-man asked to discover things lost, are of very slight interest.<sup>2</sup>

Since Miss X. drew attention to this subject experiments have proved beyond doubt that a fair percentage of people, sane and healthy, can see vivid landscapes, and figures of persons in motion, in glass balls and other vehicles. This faculty Dr. Parish attributes to "dissociation," practically to drowsiness. But he speaks by conjecture, and without having witnessed experiments, as will be shown later. I now offer a series of experiments with a glass ball, coming under my own observation, in which knowledge was apparently acquired in no ordinary way. Of the absence of fraud I am personally convinced, not only by the characters of all concerned, but by the nature of the circumstances. That adaptive memory did not later alter the narratives, as originally told, I feel certain, because they were reported to me, when I was not present, within less than a week, precisely as they are now given, except in cases specially noted.

Early in 1897 I met a young lady who told me of three or four curious hallucinatory experiences of her own, which were sufficiently corroborated. She was innocent of psychical studies, had never heard of or practised crystal-gazing, and personally was in perfect health; the pale cast of thought being remote from her. I got a glass ball, and was present when she first looked into it. She saw, I remember, the interior of a house, with a full-length portrait of a person unknown. There were, I think, one or two other fancy pictures of the familiar kind. But she presently (living as she was among

<sup>1</sup> *Op. cit.*, v. 505.

<sup>2</sup> If any reader wishes to make experiments, he, or she, should not be astonished if the first crystal figure represents "the sheeted dead," or a person ill in bed. For some reason, or no reason, this is rather a usual prelude, signifying nothing.

## PREFACE

ALTHOUGH a man by his works and personality shall have made his **mark** upon the age he lives in, yet when he has passed away and his influence with him, the next generation, and still more the succeeding one, will know little of this work, of his ideals and of the goal he strove to win, although for the student his scientific work may always live.

Thomas Henry Huxley may come to be remembered by the public merely as the man who held that we were descended from the ape, or as the apostle of Darwinism, or as the man who worsted Bishop Wilberforce at Oxford.

To prevent such limitation, and to afford more intimate and valuable reasons for remembrance of this man of science and lover of his fellow-men, I have gathered together passages, on widely differing themes, from the nine volumes of his "Essays," from his "Scientific Memoirs," and his "Letters," to be published in a simple volume, complete in itself yet of manageable size.

Some of the passages were picked out for their philosophy, some for their moral guidances, some for their scientific exposition of natural facts, or for their insight into social questions; others for their charms of imagination or general humour, and many—not the least for their pure beauty of lucid English writing.

In so much wealth of material it was difficult to restrict the gathering.

My great wish is that this short book, by the easy method of its contents, may attract the attention of those persons who are yet unacquainted with my husband's writings; of the men and women of leisure, who, although they may have heard of the "Essays," do not care to work their way through the nine volumes; of others who would like to read them, but who have either no time to do so or coin wherewith to buy them. More especially do I hope that these selections may attract the attention of the working man, whose cause my husband so ardently espoused, and to whom he was the first to reveal, by his free lectures, the loveliness of Nature, the many rainbow-coloured rays of science, and to show forth to his listeners how all these glorious rays unite in the one pure white light of holy truth.

I am most grateful to our son Leonard Huxley for weeding out the overgrowth of my extracts, for indexing the text of the book, and seeing it through the press for me.

HODESLEA, EASTBOURNE,  
*Feb. 1st, 1911.*

strangers) developed a power of "seeing" persons and places unknown to her, but familiar to them. These experiences do seem to me to be good examples of what is called "thought-transference"; indeed, I never before could get out of a level balance of doubt on that subject, a balance which now leans considerably to the affirmative side. There may be abundance of better evidence, but, knowing the persons and circumstances, and being present once at what seemed to me a crucial example, I was more inclined to be convinced. This attitude appears, to myself, illogical, but it is natural and usual.

We cannot tell what indications may be accidentally given in experiments in thought-transference. But in these cases of crystal-gazing the detail was too copious to be conveyed, by a looker-on, in a wink or a cough. I do not mean to say that success was invariable. I thought of Dr. W. G. Grace, and the "scryer" saw an old man crawling along with a stick. But I doubt if Dr. Grace is very deeply seated in that mystic entity, my sub-conscious self. The "series" which came right were sometimes, but not always, those of which the "agent" (or person scried for) was consciously thinking. But the examples will illustrate the various kind of occurrences.

Here one should first consider the arguments against accepting recognition of objects merely described by another person. The crystal-gazer may know the inquirer so intimately as to have a very good guess at the subject of his meditation. Again, a man is likely to be thinking of a woman, and a woman of a man, so the field of conjecture is limited. In answer to the first objection I may repeat that the crystal-gazer was among strangers, all of whom, myself included, she now saw for the first time. Nor could she have studied their histories beforehand, for she could not know (normally) when she left home that she was about to be shown a glass ball, or whom she would meet. The second

objection is met by the circumstance that ladies were *not* usually picked out for men, nor men for women. Indeed, these choices were the exceptions, and in each case were marked by minutely particular details. A third objection is that credulity, or the love of strange novelties, or desire to oblige, biases the inquirers, and makes them anxious to recognise something familiar in the scryer's descriptions. In the same way we know how people recognise faces in the most blurred and vague of spiritist photographs, or see family resemblances in the most rudimentary dough-faced babies. Take descriptions of persons in a passport, or in a proclamation sketching the personal appearance of a criminal. These fit the men or women intended, but they also fit a crowd of other people. The description given by the scryer then may come right by a fortuitous coincidence, or may be too credulously recognised.

The complex of coincidences, however, could not be attributed to chance selection out of the whole possible field of conjecture. We must remember, too, that a series of such hits increases, at an enormous rate, the odds against accidental conjecture. Of such mere luck I may give an example. I was writing a story of which the hero was George Kelly, one of the "Seven Men of Moidart." A year after composing my tale I found the Government description of Mr. Kelly (1736). It exactly tallied with my purely fanciful sketch, down to eyes, and teeth, and face, except that I made my hero "about six feet," whereas the Government gave him five feet ten. But I knew beforehand that Mr. Kelly was a clergyman; his curious career proved him to be a person of great activity and geniality—and he was of Irish birth. Even a dozen such guesses, equally correct, could not suggest any powers of "vision," when so much was known beforehand about the person guessed at. I now give cases in the experience of Miss Angus, as one may call the crystal gazer. The first occurred



the day after she got the glass ball for the first time. She writes:—

I.—A lady one day asked me to scry out a friend of whom she would think. Almost immediately I exclaimed: "Here is an old, old lady looking at me with a triumphant smile on her face. She has a prominent nose and nut-cracker chin. Her face is very much wrinkled, especially at the sides of her eyes, as if she were always smiling. She is wearing a little white shawl with a black edge. *But!* .....she *can't* be old, as her hair is quite brown! although her face looks so very, very old." The picture then vanished, and the lady said that I had accurately described her friend's *mother* instead of himself; that it was a family joke that the mother must dye her hair, it was so brown, and she was eighty-two years old. The lady asked me if the vision were distinct enough for me to recognise a likeness in the son's photograph; next day she laid several photographs before me, and in a moment, without the slightest hesitation, I picked him out, from his wonderful likeness to my vision!

The inquirer verbally corroborated all the facts to me, within a week, but leaned to a theory of "electricity." She has read and confirms this account.

II.—One afternoon I was sitting beside a young lady whom I had never seen or heard of before. She asked if she might look into my crystal, and while she did so I happened to look over her shoulder and saw a ship tossing on a very heavy choppy sea, although land was still visible in the dim distance. That vanished, and, as suddenly, a little house appeared with five or six (I forgot now the exact number I then counted) steps leading up to the door. On the second step stood an old man reading a newspaper. In front of the house was a field of thick, stubby grass where some *lambs*, I was going to say, but they were more like very small *sheep*.....were grazing.

When the scene vanished, the young lady told me I had vividly described a spot in Shetland where she and her mother were soon going to spend a few weeks.

I heard of this case from Miss Angus within a day or two of its occurrence, and it was then confirmed to me, verbally, by the other lady. She again

confirms it (December 21st, 1897). Both ladies had hitherto been perfect strangers to each other. The old man was the schoolmaster, apparently. In her MS. Miss Angus writes "Skye," but at the time both she and the other lady said Shetland (which I have restored). In Shetland the sheep, like the ponies, are small. Fortuitous coincidence, of course, may be invoked. The next account is by another lady, say Miss Rose.

III.—Writes Miss Rose: My first experience of crystal-gazing was 'not a pleasant one, as will be seen from the following, which I now relate as exactly as I can remember. I asked my friend Miss Angus to allow me to look in her crystal, and, after doing so for a short time, gave up, saying it was very unsatisfactory, as, although I saw a room with a bright fire in it and a bed all curtained and people coming and going, I could not make out who they were, so I returned the crystal to Miss Angus, with the request that she might look for me. She said at once: "I see a bed with a man in it looking very ill, and a lady in black beside it." Without saying any more Miss Angus still kept looking, and after some time, I asked to have one more look, and on her passing the ball back to me I received quite a shock, for there, perfectly clearly in a bright light, I saw stretched out in bed an old man apparently dead; for a few minutes I could not look, and on doing so once more there appeared a lady in black, and out of dense darkness a long black object was being carried, and it stopped before a dark opening overhung with rocks. At the time I saw this I was staying with cousins, and it was a Friday evening. On Sunday we heard of the death of the father-in-law of one of my cousins; of course, I knew the old gentleman was very ill; but my thoughts were not in the least about him when looking in the crystal. I may also say I did not recognise in the features of the dead man those of the old gentleman whose death I mention. On looking again on Sunday I once more saw the curtained bed and some people.

I now give Miss Angus's version of this case, as originally received from her (December, 1897). I had previously

# APHORISMS AND REFLECTIONS

## I

There is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off.

## II

Natural knowledge, seeking to satisfy natural wants, has found the ideas which can alone still spiritual cravings. I say that natural knowledge, in desiring to ascertain the laws of comfort, has been driven to discover those of conduct, and to lay the foundations of a new morality.

## III

The improver of natural knowledge absolutely refuses to acknowledge authority, as such. For him, scepticism is the highest of duties; blind faith the one unpardonable sin.

## IV

The man of science has learned to believe in justification, not by faith, but by verification.

## V

No delusion is greater than the notion that method and industry can make up for lack of mother-wit, either in science or in practical life.

## VI

Nothing great in science has ever been done by men, whatever their powers, in whom the divine afflatus of the truth-seeker was wanting.

## VII

In science, as in art, and, as I believe, in every other sphere of human activity, there may be wisdom in a multitude of counsellors, but it is only in one or two of them.

## VIII

Nothing can be more incorrect than the assumption one sometimes meets with, that physics has one method, chemistry another, and biology a third.

## IX

Any one who is practically acquainted with scientific work is aware that those who refuse to go beyond fact, rarely get as far as fact; and any one who has studied the history of science knows that almost every great step therein has been made by the "anticipation of Nature."

## X

There are three great products of our time. . . . One of these is that doctrine concerning the constitution of matter which, for want of a better name, I will call "molecular"; the second is the doctrine of the conservation of energy; the third is the doctrine of evolution.

received an oral version, from a person present at the scrying. It differed, in one respect, from what Miss Angus writes. Her version is offered because it is made independently, without consultation, or attempt to reconcile recollections :—

At a recent experience of gazing for the first time I was able to make another see what *I* saw in the crystal. Miss Rose called one afternoon, and begged me to look in the ball for her. I did so, and immediately exclaimed: "Oh! here is a bed, with a man in it looking very ill [I saw he was dead, but refrained from saying so], and there is a lady, dressed in black, sitting beside the bed." I did not recognise the man to be anyone I knew, so I told her to look. In a very short time she called out: "Oh! I see the bed, too! But, oh! take it away; the man is *dead!*" She got quite a shock, and said she would never look in it again. Soon, however, curiosity prompted her to have one more look, and the scene at once came back again; and slowly, from a misty object at the side of the bed, the lady in black became quite distinct. Then she described several people in the room, and said they were carrying something all draped in black. When she saw this she put the ball down, and would not look at it again. She called again on Sunday (this had been on Friday) with her cousin, and we teased her about being *afraid* of the crystal; so she said she would just look in it once more. She took the ball, but immediately laid it down again, saying: "No, I won't look, as the bed with the awful man in it is there again!"

When they went home they heard that the cousin's father-in-law had died that afternoon; but to show he had never been in our thoughts, although we *all* knew he had not been well, *no one* suggested him; his name was never mentioned in connection with the vision.

"Clairvoyance," of course, is not illustrated here, the corpse being unrecognised, and the coincidence, doubtless, accidental.

<sup>1</sup> Sunday afternoon. It is not implied that the pictures on Friday were *prophetic*. Probably Miss Rose, saw what Miss Angus had seen by aid of suggestion.

The next case is attested by a civilian, a slight acquaintance of Miss Angus's, who now saw him for the second time only, but better known to her family :—

IV.—On Thursday, March —? 1897, I was lunching with my friends the Anguses, and during luncheon the conversation turned upon crystal balls and the visions that, by some people, can be seen in them. The subject arose owing to Miss Angus having just been presented with a glass ball by Mr. Andrew Lang. I asked her to let me see it, and then to try and see if she could conjure up a vision of any person of whom I might think.....I fixed my mind upon a friend, a young trooper in the [regiment named], as I thought his would be a striking and peculiar personality, owing to his uniform, and also because I felt sure that Miss Angus could not possibly know of his existence. I fixed my mind steadily upon my friend; and presently Miss Angus, who had already seen two cloudy visions of faces and people, called out: "Now I see a man on a horse most distinctly; he is dressed most queerly, and glitters all over—why, it's a soldier! a soldier in uniform; but it's not an *officer*." My excitement on hearing this was so great that I ceased to concentrate my attention upon the thought of my friend; and the vision faded away, and could not afterwards be recalled.—December 2nd, 1897.

The witness gives the name of the trooper, whom he had befriended in a severe illness. Miss Angus's own account follows; she had told me the story in June, 1897 :—

Shortly after I became the happy possessor of a "crystal," I managed to convert several very undecided "sceptics"; and I will here give a short account of my experiences with two or three of them.

One was with a Mr. —, who was so determined to baffle me, he said he would think of a friend it would *not* be possible for me to describe!

I had only met Mr. — the day before, and knew almost nothing about him or his personal friends.

I took up the ball, which immediately became misty; and out of this mist gradually a crowd of people appeared but too indistinctly for me to recognise

## APHORISMS AND REFLECTIONS

XI

M. Comte's philosophy, in practice, might be compendiously described as Catholicism *minus* Christianity.

XII

Fact I know; and Law I know; but what is this Necessity, save an empty shadow of my own mind's throwing?

XIII

We live in a world which is full of misery and ignorance, and the plain duty of each and all of us is to try to make the little corner he can influence somewhat less miserable and somewhat less ignorant than it was before he entered it.

XIV

The man of science, who, forgetting the limits of philosophical inquiry, slides from these formulae and symbols into what is commonly understood by materialism, seems to me to place himself on a level with the mathematician, who should mistake the *a*'s and *j*'s with which he works his problems for real entities and with this further disadvantage, as compared with the mathematician, that the blunders of the latter are of no practical consequence, while the errors of systematic materialism may paralyse the energies and destroy the beauty of a life.

XV

There are some men who are counted great because they represent the actuality of their own age, and mirror it as it is. Such an one was Voltaire, of whom it was epigrammatically said, "he expressed everybody's thoughts better than anybody." But there are other men who attain greatness because they embody the potentiality of their own day, and magic-

ally reflect the future. They express the thoughts which will be everybody's two or three centuries after them. Such an one was Descartes.

XVI

"Learn what is true, in order to do what is right," is the summing up of the whole duty of man, for all who are unable to satisfy their mental hunger with the east wind of authority.

XVII

When I say that Descartes consecrated doubt, you must remember that it was that sort of doubt which Goethe has called "the active scepticism, whose whole aim is to conquer itself"; and not that other sort which is born of flippancy and ignorance, and whose aim is only to perpetuate itself, as an excuse for idleness and indifference.

XVIII

What, then, is certain? . . . Why, the fact that the thought, the present consciousness, exists. Our thoughts may be delusive, but they cannot be fictitious. As thoughts, they are real and existent, and the cleverest deceiver cannot make them otherwise.

XIX

Thought is existence. More than that, so far as we are concerned, existence is thought, all our conceptions of existence being some kind or other of thought.

XX

It is enough for all the practical purposes of human existence if we find that our trust in the representations of consciousness is verified by results; and that, by their help, we are enabled "to walk sure-footedly in this life."

anyone, until suddenly a man on horseback came galloping along. I remember saying : "I can't describe what he is like, but he is dressed in a very queer way—in something so bright that the sun shining on him quite dazzles me, and I cannot make him out !" As he came nearer, I exclaimed : "Why, it's a *soldier* in shining armour ; but it's not an *officer*—only a *soldier* !" Two friends who were in the room said Mr. —'s excitement was intense ; and my attention was drawn from the ball by hearing him call out : "It's wonderful !—it's perfectly true ! I was thinking of a young boy—a son of a crofter—in whom I am deeply interested, and who is a trooper in the —, in London—which would account for the crowd of people round him in the street !"

The next case is given, first in the version of the lady who was unconsciously scried for, and next in that of Miss Angus. The other lady writes :—

V.—I met Miss A. for the first time in a friend's house in the south of England ; and one evening mention was made of a crystal ball ; and our hostess asked Miss A. to look in it, and, if possible, tell her what was happening to a friend of hers. Miss A. took the crystal ; and our hostess put her hand on Miss A.'s forehead to "will her." I, not believing in this, took up a book and went to the other side of the room. I was suddenly very much startled to hear Miss A., in quite an agitated way, describe a scene that had most certainly been very often in my thoughts, but of which I had never mentioned a word. She accurately described a race-course in Scotland, and an accident which happened to a friend of mine only a week or two before ; and she was evidently going through the same doubt and anxiety that I did at the time as to whether he was actually killed or only very much hurt. It really was a most wonderful revelation to me, as it was the *very first time* I had seen a crystal. Our hostess, of course, was very much annoyed that she had not been able to influence Miss A., while I, who had appeared so *very indifferent*, should *have affected* her.—November 23rd, 1897.

Miss Angus herself writes :—

Another case was a rather interesting one, as I somehow got inside the thoughts

of one lady while *another* was doing her best to influence me !

Miss —, a friend in Brighton, has strange "magnetic" powers, and felt quite sure of success with me and the ball.

Another lady, Miss H., who was present, laughed at the whole thing, especially when Miss — insisted on holding my hand and putting her other hand on my forehead ! Miss H., in a scornful manner, took up a book, and, crossing to the other side of the room, left us to our folly.

In a very short time I felt myself getting excited, which had never happened before when I looked in the crystal. I saw a crowd of people ; and in some strange way I felt I was in it, and we all seemed to be waiting for something. Soon a rider came past, young, dressed for racing. His horse ambled past, and he smiled and nodded to those he knew in the crowd—and then was lost to sight.

In a moment we all seemed to feel as if something had happened, and I went through great agony of suspense trying to see what seemed *just* beyond my view. Soon, however, two or three men approached, and carried him past before my eyes ; and again my anxiety was intense to discover if he were only very badly hurt, or if life were really extinct. All this happened in a few moments, but long enough to have left me so agitated that I could not realise it had only been a vision in a glass ball.

By this time Miss H. had laid aside her book, and came forward quite startled, and told me that I had accurately described a scene on a race-course in Scotland which she had witnessed just a week or two before—a scene that had very often been in her thoughts, but, as we were strangers to each other, she had never mentioned. She also said I had exactly described her own feelings at the time, and had brought it all back in a most vivid manner.

The other lady was rather disappointed that, after she had concentrated her thoughts so hard, I should have been influenced instead by one who had jeered at the whole affair.

[This anecdote was also told to me, within a few days of the occurrence, by Miss Angus. Her version was that she first saw a gentleman rider going to the

XXI

It is because the body is a machine that education is possible. Education is the formation of habits, a superinducing of an artificial organisation upon the natural organisation of the body ; so that acts, which at first required a conscious effort, eventually became unconscious and mechanical.

XXII

I protest that if some great Power would agree to make me always think what is true and do what is right, on condition of being turned into a sort of clock and wound up every morning before I got out of bed, I should instantly close with the offer.

XXIII

The only freedom I care about is the freedom to do right ; the freedom to do wrong I am ready to part with on the cheapest terms to anyone who will take it of me.

XXIV

Whatever evil voices may rage, Science, secure among the powers that are eternal, will do her work and be blessed.

XXV

There is assuredly no more effectual method of clearing up one's own mind on any subject than by talking it over, so to speak, with men of real power and grasp, who have considered it from a totally different point of view.

XXVI

The parallax of time helps us to the true position of a conception, as the parallax of space helps us to that of a star.

XXVII

[If animals are conscious automata with souls] the soul stands related to the body

as the bell of a clock to the works, and consciousness answers to the sound which the bell gives out when it is struck.

XXVIII

Logical consequences are the scarecrows of fools and the beacons of wise men.

XXIX

The only question which any wise man can ask himself, and which any honest man will ask himself, is whether a doctrine is true or false.

XXX

Of all the senseless babble I have ever had occasion to read, the demonstrations of these philosophers who undertake to tell us all about the nature of God would be the worst, if they were not surpassed by the still greater absurdities of the philosophers who try to prove that there is no God.

XXXI

That which is to be lamented, I fancy, is not that society should do its utmost to help capacity to ascend from the lower strata to the higher, but that it has no machinery by which to facilitate the descent of incapacity from the higher strata to the lower.

XXXII

Time, whose tooth gnaws away everything else, is powerless against truth.

XXXIII

Misery is a match that never goes out.

XXXIV

Genius as an explosive power beats gunpowder hollow ; and if knowledge, which should give that power guidance, is

post and nodding to his friends. Then she saw him carried on a stretcher through the crowd. She seemed, she said, to be actually present, and felt somewhat agitated. The fact of the accident was, later, mentioned to me in Scotland by another lady, a stranger to all the persons.—A.L.]

VI.—I may briefly add an experiment of December 21st, 1897. A gentleman had recently come from England to the Scottish town where Miss Angus lives. He dined with her family, and about 10.15 to 10.30 p.m. she proposed to look in the glass for a scene or person of whom he was to think. He called up a mental picture of a ball at which he had recently been, and of a young lady to whom he had there been introduced. The lady's face, however, he could not clearly visualise, and Miss Angus reported nothing but a view of an empty ball-room, with polished floor and many lights. The gentleman made another effort, and remembered his partner with some distinctness. Miss Angus then described another room, not a ball-room, comfortably furnished, in which a girl with brown hair drawn back from her forehead, and attired in a high-necked white blouse, was reading, or writing letters, under a bright light in an unshaded glass globe. The description of the features, figure, and height tallied with Mr. —'s recollection; but he had never seen this Geraldine of an hour except in ball dress. He and Miss Angus noted the time by their watches (it was 10.30), and Mr. — said that on the first opportunity he would ask the young lady how she had been dressed and how employed at that hour on December 21st. On December 22nd he met her at another dance, and her reply corroborated the crystal picture. She had been writing letters, in a high-necked white blouse, under an incandescent gas lamp with an unshaded glass globe. She was entirely unknown to Miss Angus, and had only been seen once by Mr. —. Mr. — and the

lady of the crystal picture corroborated all this in writing.

I now suggested an experiment to Miss Angus, which, after all, was clearly not of a nature to establish a "test" for sceptics. The inquirer was to write down, and enclose in an envelope, a statement of his thoughts; Miss Angus was to do the same with her description of the picture seen by her; and these documents were to be sent to me, without communication between the inquirer and the crystal-gazer. Of course, this could in no way prove absence of collusion, as the two parties might arrange privately beforehand what the vision was to be.

Indeed, nobody is apt to be convinced, or shaken, unless he is himself the inquirer and a stranger to the seeress, as the people in these experiments were. Evidence interesting to *them*—and, in a secondary degree, to others who know them—can thus be procured; but strangers are left to the same choice of doubts as in all reports of psychological experiences, "chromatic audition," views of coloured numerals, and the other topics illustrated by Mr. Galton's interesting researches.

In this affair of the envelopes the inquirer was a Mr. Pembroke, who had just made Miss Angus's acquaintance, and was but a sojourner in the land. He wrote, before knowing what Miss Angus had seen in the ball:—

VII.—On Sunday, January 23rd, 1908, while Miss Angus was looking in the crystal ball, I was thinking of my brother, who was, I believe, at that time, somewhere between Sabathu (Punjab, India) and Egypt. I was anxious to know what stage of his journey he had reached.

Miss Angus saw, and wrote, before telling Mr. Pembroke:—

A long and very white road, with tall trees at one side; on the other, a river or lake of greyish water. Blue sky, with a crimson sunset. A great black ship is anchored near, and on the deck I see a man lying, apparently very ill. He is a powerful-looking man, fair, and very much bronzed. Seven or eight Englishmen, in

wanting, the chances are not small that the rocket will simply run amuck among friends and foes.

## XXXV

Thoughtfulness for others, generosity, modesty, and self-respect, are the qualities which make a real gentleman, or lady, as distinguished from the venerated article which commonly goes by that name.

## XXXVI

The higher the state of civilisation, the more completely do the actions of one member of the social body influence all the rest and the less possible is it for any one man to do a wrong thing without interfering, more or less, with the freedom of all his fellow-citizens.

## XXXVII

I take it that the good of mankind means the attainment, by every man, of all the happiness which he can enjoy without diminishing the happiness of his fellow men.

## XXXVIII

Education promotes peace by teaching men the realities of life and the obligations which are involved in the very existence of society; it promotes intellectual development, not only by training the individual intellect, but by sifting out from the masses of ordinary or inferior capacities, those who are competent to increase the general welfare by occupying higher positions; and, lastly, it promotes morality and refinement, by teaching men to discipline themselves, and by leading them to see that the highest, as it is the only permanent, content is to be attained, not by grovelling in the rank and steaming valleys of sense, but by continual striving towards those high peaks, where, resting in eternal calm, reason discerns the undefined but bright

ideal of the highest Good—"a cloud by day, a pillar of fire by night."

## XXXIX

Missionaries, whether of philosophy or of religion, rarely make rapid way, unless their preachings fall in with the pre-possessions of the multitude of shallow thinkers, or can be made to serve as a stalking-horse for the promotion of the practical aims of the still larger multitude, who do not profess to think much, but are quite certain they want a great deal.

## XL

Proclaim human equality as loudly as you like, Witless will serve his brother.

## XLI

There is no sea more dangerous than the ocean of practical politics—none in which there is more need of good pilotage and of a single, unfaltering purpose when the waves rise high.

## XLII

The doctrine that all men are, in any sense, or have been, at any time, free and equal, is an utterly baseless fiction.

## XLIII

For the welfare of society, as for that of individual men, it is surely essential that there should be a statute of limitations in respect of the consequences of wrong-doing.

## XLIV

"Musst immer thun wie neu geboren" is the best of all maxims for the guidance of the life of States, no less than of individuals.

## XLV

The population question is the real riddle of the sphinx, to which no political

very light clothes, are standing on the road beside the boat.

January 23rd, 1898.

"A great black ship," anchored in "a river or lake," naturally suggests the Suez Canal, where, in fact, Mr. Pembroke's brother was just arriving, as was proved by a letter received from him eight days after the experiment was recorded, on January 31st. At that date Mr. Pembroke had not yet been told the nature of Miss Angus's crystal picture, nor had she any knowledge of his brother's whereabouts.

In February, 1898, Miss Angus again came to the place where I was residing. We visited together the scene of an historical crime, and Miss Angus looked into the glass ball. It was easy for her to "visualise" the incidents of the crime (the murder of Cardinal Beaton), for they are familiar enough to many people. What she did see in the ball was a tall, pale lady, "perhaps forty, but looking thirty-five," with hair drawn back from the brows, standing beside a high chair, dressed in a wide farthingale of stiff grey brocade, without a ruff. The costume corresponds well (as we found) with that of 1546, and I said, "I suppose it is Mariotte Ogilvy"—to whom Miss Angus's historical knowledge (and perhaps that of the general public) did not extend. Mariotte was the Cardinal's lady-love, and was in the Castle on the night before the murder, according to Knox. She had been in my mind, whence (on the theory of thought transference) she may have passed to Miss Angus's mind; but I had never speculated on Mariotte's costume. Nothing but conjecture, of course, comes of these apparently "retrospective" pictures; though a most singular and picturesque coincidence occurred, which may be told in a very different connection.

The next example was noted at the same town. The lady who furnishes it is well known to me, and it was verbally corroborated by Miss Angus, to whom the lady, her absent nephew, and all about her, were entirely strange:—

VIII.—I was very anxious to know

whether my nephew would be sent to India this year, so I told Miss Angus that I had thought of something, and asked her to look in the glass ball. She did so, but almost immediately turned round and looked out of the window at the sea, and said: "I saw a ship so distinctly I thought it must be a reflection." She looked in the ball again, and said: "It is a large ship, and it is passing a huge rock with a lighthouse on it. I can't see who are on the ship, but the sky is very clear and blue. Now I see a large building, something like a club, and in front there are a great many people sitting and walking about. I think it must be some place abroad, for the people are all dressed in very light clothes, and it seems to me very sunny and warm. I see a young man sitting on a chair, with his feet straight out before him. He is not talking to anyone, but seems to be listening to something. He is dark and slight, and not very tall; and his eyebrows are dark and very distinctly marked."

I had not had the pleasure of meeting Miss Angus before, and she knew nothing whatever about my nephew; but the young man described was exactly like him, both in his appearance and in the way he was sitting.

In this case thought transference may be appealed to. The lady was thinking of her nephew in connection with India. It is not maintained, of course, that the picture was of a prophetic character.

The following examples have some curious and unusual features. On Wednesday, February 2nd, 1897, Miss Angus was looking in the crystal, to amuse six or seven people whose acquaintance she had that day made. A gentleman, Mr. Bissett, asked her "what letter was in his pocket." She then saw, under a bright sky, and, as it were, a long way off, a large building, in and out of which many men were coming and going. Her impression was that the scene must be abroad. In the little company present, it should be added, was a lady, Mrs. Cockburn, who had considerable reason to think of her young married daughter, then at a place about fifty miles away. After Miss

Œdipus has as yet found the answer. In view of the ravages of the terrible monster, over-multiplication, all other riddles sink into insignificance.

XVI

The "Law of Nature" is not a command to do, or to refrain from doing, anything. It contains, in reality, nothing but a statement of that which a given being tends to do under the circumstances of its existence; and which, in the case of a living and sensitive being, it is necessitated to do, if it is to escape certain kinds of disability, pain and ultimate dissolution.

XVII

Probably none of the political delusions which have sprung from the "natural rights" doctrine has been more mischievous than the assertion that all men have a natural right to freedom, and that those who willingly submit to any restriction of this freedom, beyond the point determined by the deductions of *a priori* philosophers, deserve the title of slave. But to my mind, this delusion is incomprehensible except as the result of the error of confounding natural with moral rights.

XVIII

The very existence of society depends on the fact that every member of it tacitly admits that he is not the exclusive possessor of himself, and that he admits the claim of the polity of which he forms a part, to act, to some extent, as his master.

XIX

Surely there is a time to submit to guidance and a time to take one's own way at all hazards.

L

Individualism, pushed to anarchy, in the family is as ill-founded theoretically and as mischievous practically as it is in the State;

while extreme regimentation is a certain means of either destroying self-reliance or of maddening to rebellion.

LI

A man in his development runs for a little while parallel with, though never passing through, the form of the meanest worm, then travels for a space beside the fish, then journeys along with the bird and the reptile for his fellow travellers; and only at last, after a brief companionship with the highest of the four-footed and four-handed world, rises into the dignity of pure manhood.

LII

Not only does every animal live at the expense of some other animal or plant, but the very plants are at war. . . . The individuals of a species are like the crew of a foundered ship, and none but good swimmers have a chance of reaching the land.

LIII

When we know that living things are formed of the same elements as the inorganic world, that they act and react upon it, bound by a thousand ties of natural piety, is it probable, nay is it possible, that they, and they alone, should have no order in their seeming disorder, no unity in their seeming multiplicity, should suffer no explanation by the discovery of some central and sublime law of mutual connection?

LIV

The student of Nature wonders the more and is astonished the less, the more conversant he becomes with her operations; but of all the perennial miracles she offers to his inspection, perhaps the most worthy of admiration is the development of a plant or of an animal from its embryo.

LV

Matter and force are the two names of the one artist who fashions the living as well as the lifeless.

Angus had described the large building and crowds of men, someone asked, "Is it an exchange?" "It might be," she said. "Now comes a man in a great hurry. He has a broad brow, and short, curly hair; <sup>1</sup> hat pressed low down on his eyes. The face is very serious; but he has a delightful smile." Mr. and Mrs. Bissett now both recognised their friend and stockbroker, whose letter was in Mr. Bissett's pocket.

The vision, which interested Miss Angus, passed away, and was interrupted by that of a hospital nurse, and of a lady in a *peignoir*, lying on a sofa, *with bare feet*.<sup>2</sup> Miss Angus mentioned this vision as a bore, she being more interested in the stockbroker, who seems to have inherited what was once in the possession of another stockbroker—"the smile of Charles Lamb." Mrs. Cockburn, for whom no pictures appeared, was rather vexed, and privately expressed with freedom a very sceptical opinion about the whole affair. But on Saturday, February 5th, 1897, Miss Angus was again with Mr. and Mrs. Bissett. When Mrs. Bissett announced that she had "thought of something," Miss Angus saw a walk in a wood or garden, beside a river, under a brilliant blue sky. Here was a lady, very well dressed, twirling a white parasol on her shoulder as she walked, in a curious "stumpy" way, beside a gentleman in light clothes, such as are worn in India. He was broad-shouldered, had a short neck and a straight nose, and seemed to listen, laughing, but indifferent, to his obviously vivacious companion. The lady had a "drawn" face, indicative of ill-health. Then followed a scene in which the man, without the lady, was looking on at a number of Orientals busy in the felling of trees. Mrs. Bissett recognised, in the lady, her sister, Mrs. Clifton, in India—above all, when Miss Angus

gave a realistic imitation of Mrs. Clifton's walk, the peculiarity of which was caused by an illness some years ago. Mrs. and Mr. Bissett also recognised their brother-in-law in the gentleman seen in both pictures. On being shown a portrait of Mrs. Clifton as a girl, Miss Angus said it was "like, but too pretty." A photograph done recently, however, showed her the "drawn face" of the crystal picture.<sup>1</sup>

Next day, Sunday, February 6th, Mrs. Bissett received—what was not usual—a letter from her sister in India, Mrs. Clifton, dated January 20th. Mrs. Clifton described a place in a native State, where she had been at a great "function," in certain gardens beside a river. She added that they were going to another place for a certain purpose, "and then we go into camp till the end of February." One of Mr. Clifton's duties is to direct the clearing of wood preparatory to the formation of the camp, as in Miss Angus's crystal picture.<sup>2</sup> The sceptical Mrs. Cockburn heard of these coincidences, and an idea occurred to her. She wrote to her daughter, who has been mentioned, and asked whether, on Wednesday, February 2nd, she had been lying on a sofa in her bed-room, with bare feet. The young lady confessed that it was indeed so;<sup>3</sup> and, when she heard how the fact came to be known, expressed herself with some warmth on the abuse of glass balls, which tend to rob life of its privacy.

In this case the *prima facie* aspect of things is that a thought of Mr. Bissett's about his stockbroker, *dulce ridentem*, somehow reflected itself into Miss Angus's mind by way of the glass ball, and was interrupted by a thought of

<sup>1</sup> I saw the photographs.

<sup>2</sup> I have been shown the letter of January 20th, which confirmed the evidence of the crystal pictures. The camp was formed for official purposes in which Mr. Clifton was concerned. A letter of February 9th unconsciously corroborates.

<sup>3</sup> The incident of the feet occurred at 4.30 to 7.30 p.m. The crystal picture was about 10 p.m.

<sup>1</sup> Miss Angus could not be sure of the colour of the hair.

<sup>2</sup> The position was such that Miss Angus could not see the face of the lady.

LVI

There is not throughout Nature a law of wider application than this, that a body impelled by two forces takes the direction of their resultant.

LVII

Orthodoxy is the Bourbon of the world of thought. It learns not, neither can it forget.

LVIII

Who shall number the patient and earnest seekers after truth, from the days of Galileo until now, whose lives have been embittered and their good name blasted by the mistaken zeal of Bibliolaters? Who shall count the host of weaker men whose sense of truth has been destroyed in the effort to harmonise impossibilities whose life has been wasted in the attempt to force the generous new wine of Science into the old bottles of Judaism, compelled by the outcry of the same strong party?

LIX

When Astronomy was young "the morning stars sang together for joy," and the planets were guided in their courses by celestial hands. Now, the harmony of the stars has resolved itself into gravitation according to the inverse squares of the distances, and the orbits of the planets are deducible from the laws of the forces which allow a schoolboy's stone to break a window.

LX

The lightning was the angel of the Lord; but it has pleased Providence, in these modern times, that science should make it the humble messenger of man, and we know that every flash that shimmers about the horizon on a summer's evening is determined by ascertainable conditions, and that its direction and brightness might, if our knowledge of these were great enough, have been calculated.

LXI

Why should the souls [of philosophers] be deeply vexed? The majesty of Fact is on their side, and the elemental forces of Nature are working for them. Not a star comes to the meridian at its calculated time but testifies to the justice of their methods, — their beliefs are "one with the falling rain and with the growing corn." By doubt they are established, and open inquiry is their bosom friend.

LXII

Harmonious order governing eternally continuous progress the web and woof of matter and force interweaving by slow degrees, without a broken thread, that veil which lies between us and the Infinite that universe which alone we know or can know; such is the picture which science draws of the world, and in proportion as any part of that picture is in unison with the rest, so may we feel sure that it is rightly painted.

LXIII

Mix salt and sand, and it shall puzzle the wisest of men, with his mere natural appliances, to separate all the grains of sand from all the grains of salt; but a shower of rain will effect the same object in ten minutes.

LXIV

Elijah's great question, "Will you serve God or Baal? Choose ye," is uttered audibly enough in the ears of every one of us as we come to manhood. Let every man who tries to answer it seriously ask himself whether he can be satisfied with the Baal of authority, and with all the good things his worshippers are promised in this world and the next. If he can, let him, if he be so inclined, amuse himself with such scientific implements as authority tells him are safe and will not cut his fingers; but let him not imagine he is, or can be, both a true son of the Church and a loyal soldier of science.

Mrs. Cockburn's as to her daughter. But how these thoughts came to display the unknown facts concerning the garden by the river, the felling of trees for a camp, and the bare feet, is a question about which it is vain to theorise.<sup>1</sup>

On the vanishing of the jungle scene there appeared a picture of a man in a dark undress uniform, beside a great bay, in which were ships of war. Wooden huts, as in a plague district, were on shore. Mr. Bissett asked, "What is the man's expression?" "He looks as if he had been giving a lot of last orders." Then appeared "a place like a hospital, with five or six beds—no, berths; it is a ship. Here is the man again." He was minutely described, one peculiarity being the way in which his hair grew—or, rather, did not grow—on his temples.

Miss Angus now asked, "Where is my little lady?"—meaning the lady of the twirling parasol and *staccato* walk. "Oh, I've left off thinking of her," said Mrs. Bissett, who had been thinking of, and recognised in, the officer in undress uniform, her brother, the man with the singular hair, whose face, in fact, had been scarred in that way by an encounter with a tiger. He was expected to sail from Bombay, but news of his setting forth has not been received (February 10th) at the moment when this is written.<sup>2</sup>

In these Indian cases "thought-transference" may account for the correspondence between the figures seen by Miss Angus and the ideas in the mind of Mr. and Mrs. Bissett. But the hypothesis of thought-transference, while it would

cover the wooden huts at Bombay (Mrs. Bissett knowing that her brother was about to leave that place), can scarcely explain the scene in the garden by the river and the scene with the trees. The incident of the bare feet may be regarded as a fortuitous coincidence, since Miss Angus saw the young lady foreshortened, and could not describe her face.

The reader may have already observed that the phenomena which apparently point to some unaccountable supernormal faculty of acquiring knowledge are "trivial." These anecdotes illustrate the triviality; but the facts certainly left a number of people, wholly unfamiliar with such experiments, under the impression that Miss Angus's glass ball was like Prince Ali's magical telescope in the *Arabian Nights*.<sup>1</sup> These experiments, however, occasionally touch on intimate personal matters, and cannot be reported in such instances.

It will be remarked that the faculty is freakish, and does not always respond to conscious exertion of thought in the mind of the inquirer. Thus, in Case I., a connection of the person thought of is discerned; in another the mind of a stranger present seems to be read. In another case (not given here) the inquirer tried to visualise a card for a person present to guess, while Miss Angus was asked to describe an object which the inquirer was acquainted with, but which he banished from his conscious thought. The double experiment was a double-barrelled success.

It seems hardly necessary to point out that chance coincidence will not cover this set of cases, where in each "guess" the field of conjecture is boundless, and is not even narrowed by the crystal-gazer's knowledge of the persons for whose diversion she makes the experiment. As "muscle-reading" is not in question (in the one case of contact

<sup>1</sup> Miss Angus had only within the week made the acquaintance of Mrs. Cockburn and the Bissetts. Of these relations of theirs at a distance she had no knowledge.

<sup>2</sup> I have seen a photograph of this gentleman, Major Hamilton, which tallies with the full description given by Miss Angus, as reported by Mrs. Bissett. All the proper names here, as throughout, are altered. This account I wrote from the verbal statement of Mrs. Bissett. It was then read and corroborated by herself, Mr. Bissett, Mr. Cockburn, Mrs. Cockburn, and Miss Angus, who added dates and signatures.

<sup>1</sup> The letters attesting each of these experiments are in my possession. The real names are in no case given in this account, by my own desire, but (with permission of the persons concerned) can be communicated privately.

LXV

Ecclesiasticism in science is only unfaithfulness to truth.

LXVI

If the blind acceptance of authority appears to him in its true colours, as mere private judgment *in excusis*, and if he have the courage to stand alone, face to face with the abyss of the eternal and unknowable, let him be content, once for all, not only to renounce the good things promised by "Infallibility," but even to bear the bad things which it prophesies; content to follow reason and fact in singleness and honesty of purpose, wherever they may lead, in the sure faith that a hell of honest men will, to him, be more endurable than a paradise full of angelic shams.

LXVII

History warns us that it is the customary fate of new truths to begin as heresies and to end as superstitions.

LXVIII

The struggle for existence holds as much in the intellectual as in the physical world. A theory is a species of thinking, and its right to exist is coextensive with its power of resisting extinction by its rivals.

LXIX

The scientific spirit is of more value than its products, and irrationally held truths may be more harmful than reasoned errors.

LXX

Every belief is the product of two factors: the first is the state of the mind to which the evidence in favour of that belief is presented; and the second is the logical cogency of the evidence itself.

LXXI

Science commits suicide when it adopts a creed.

LXXII

The method of scientific investigation is nothing but the expression of the necessary mode of working of the human mind. It is simply the mode in which all phenomena are reasoned about, rendered precise and exact.

LXXIII

There are men (and I think Priestley was one of them) to whom the satisfaction of throwing down a triumphant fallacy is as great as that which attends the discovery of a new truth; who feel better satisfied with the government of the world, when they have been helping Providence by knocking an imposture on the head; and who care even more for freedom of thought than for mere advance of knowledge. These men are the Carnots who organise victory for truth, and they are, at least, as important as the generals who visibly fight her battles in the field.

LXXIV

Material advancement has its share in moral and intellectual progress. Becky Sharp's acute remark that it is not difficult to be virtuous on ten thousand a year, has its application to nations; and it is futile to expect a hungry and squalid population to be anything but violent and gross.

LXXV

If the twentieth century is to be better than the nineteenth, it will be because there are among us men who walk in Priestley's footsteps. But whether Priestley's lot be theirs, and a future generation, in justice and in gratitude, set up their statues; or whether their names and fame are blotted out from remembrance, their work will live as long as time endures. To all

between inquirer and crystal-gazer the results were unexpected), and as no unconsciously made signs could convey, for example, the idea of a cavalry soldier in uniform, or an accident on a race-course in two *tableaux*, I do not at present see any more plausible explanation than that of thought-transference, though how that is to account for some of the cases given I do not precisely understand.

Anyone who can accept the assurance of my personal belief in the good faith of all concerned will see how very useful this faculty of crystal-gazing must be to the Apache or Australian medicine-man or Polynesian priest. Freakish as the faculty is, a few real successes, well exploited and eked out by fraud, would set up a wizard's reputation. That a faculty of being thus affected is genuine seems proved, apart from modern evidence, by the world-wide prevalence of crystal-gazing in the ethnographic region. But the discovery of this prevalence had not been made, to my know-

ledge, before modern instances induced me to notice the circumstances, sporadically recorded in books of travel.

The phenomena are certainly of a kind to encourage the savage theory of the wandering soul. How else, thinkers would say, can the seer visit the distant place or person, and correctly describe men and scenes which, in the body, he never saw? Or they would encourage the Polynesian belief that the "spirit" of the thing or person looked for is suspended by a god over the water, crystal, blood, ink, or whatever it may be. Thus, to anthropologists, the discovery of crystal-gazing as a thing widely diffused and still flourishing ought to be grateful, however much they may blame my childish credulity. I may add that I have no ground to suppose that crystal-gazing will ever be of practical service to the police, or to persons who have lost articles of portable property. But I have no objection to experiments being made at Scotland Yard.<sup>1</sup>

<sup>1</sup> The faculty of seeing "fancy pictures" in the glass is far from uncommon. I have met with only three other persons besides Miss Angus, two of them men, who had any success in "telepathic" crystal-gazing. Mr. Starr, an American critic, adds Cherokees, Aztecs, and Tonkaways to the ranks of crystal-gazers.

## XII.

### THEORIES OF THE ORIGINS OF RELIGION

MEN have applied all conceivable keys to the lock of that old problem, the Origin of Religion. The key of anthropological science is the most promising. We study man in every known stage of culture; we almost universally find him in possession of a religion of some sort; we observe that the religions of the most civilised races have points in common with those of the most untutored peoples

—and we ask: How did early man arrive at these ideas?

Two great difficulties meet us on the threshold of the inquiry—(1) There is no accepted definition of religion; what one student calls religion another may deny to be religion, or may class as magic. Lord Avebury speaks of some tribes as destitute of "true religion," without saying what he means by

eternity, the sum of truth and right will have been increased by their means ; to all eternity, falsehood and injustice will be the weaker because they have lived.

## LXXVI

Science is, I believe, nothing but *trained and organised common sense*, differing from the latter only as a veteran may differ from a raw recruit : and its methods differ from those of common sense only so far as the guardsman's cut and thrust differ from the manner in which a savage wields his club.

## LXXVII

The vast results obtained by Science are won by no mystical faculties, by no mental processes, other than those which are practised by every one of us, in the humblest and meanest affairs of life. A detective policeman discovers a burglar from the marks made by his shoe, by a mental process identical with that by which Cuvier restored the extinct animals of Montmartre from fragments of their bones.

## LXXVIII

There is no side of the human mind which physiological study leaves uncultivated. Connected by innumerable ties with abstract science, Physiology is yet in the most intimate relation with humanity ; and by teaching us that law and order, and a definite scheme of development, regulate even the strangest and wildest manifestations of individual life, she prepares the student to look for a goal even amidst the erratic wanderings of mankind, and to believe that history offers something more than an entertaining chaos—a journal of a toilsome, tragi-comic march nowhither.

## LXXIX

I cannot but think that he who finds a certain proportion of pain and evil inseparably woven up in the life of the very worms,

will bear his own share with more courage and submission ; and will, at any rate, view with suspicion those weakly amiable theories of the Divine government, which would have us believe pain to be an oversight and a mistake—to be corrected by and by. On the other hand, the predominance of happiness among living things—their lavish beauty—the secret and wonderful harmony which pervades them all, from the highest to the lowest, are equally striking refutations of that modern Manichean doctrine, which exhibits the world as a slave-mill, worked with many tears, for mere utilitarian ends.

## LXXX

To a person uninstructed in natural history, his country or sea-side stroll is a walk through a gallery filled with wonderful works of art, nine-tenths of which have their faces turned to the wall. Teach him something of natural history, and you place in his hands a catalogue of them which are worth turning round. Surely, our innocent pleasures are not so abundant in this life that we can afford to despise this or any other source of them. We should fear being banished for our neglect to that limbo where the great Florentine tells us are those who, during this life, "wept when they might be joyful."

## LXXXI

No slavery can be abolished without a double emancipation, and the master will benefit by freedom more than the freedman.

## LXXXII

Compare the average artisan and the average country squire, and it may be doubted if you will find a pin to choose between the two in point of ignorance, class feeling, or prejudice. It is true that the ignorance is of a different sort—that the class feeling is in favour of a different class—and that the prejudice has a distinct

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"true." Perhaps no two inquirers define religion in precisely the same way. Some maintain that nothing is religion which does not involve cult or worship. Yet Coleridge reckoned himself a religious man at a time when he never prayed, or, I presume, went to church—unless as preacher, perhaps.

Men may have so exalted a notion of Deity that they deem it wiser to practise no cult of any kind. The belief suffices them, and it would hardly be scientific to say that, if they have the belief, they are without religion. Their attitude is not uncommon among the most backward savages known to us, though *their* motive for assuming the attitude is probably unanalysed by themselves, or expressed only in myths. To them I could not deny religion, decadent or in germ.

Again, some may define religion as of necessity *spiritual*. Yet, as I shall show, there are many low savages who do not envisage the supreme, or, if you prefer it, superior, being of their belief as a *spirit*. He is usually styled "the Great Spirit" by European and other educated modern observers; but, as Mr. Howitt has also noticed, the Australians do not predicate spirituality of their "All Father," where belief in an All Father exists. To them he is merely an anthropomorphic being, usually without known beginning, usually conceived of as prior to, and not subject to, death. He "can go everywhere, and do everything," and "sees all that you do." That is, in modern words, he is eternal, omnipotent, and omnipresent, or omniscient. But he is only all that in a *general* statement. Like the gods of the classical mythologies, he is, in myth, represented as having been under all sorts of practical limitations during his period of residence on earth. In myth he is often absurd, and far from estimable—a point considered in our conclusion.

The important thing to observe is that, by native "theologians," the idea of spirituality is not applied to this being; not that these speculators are

destitute of the conception of spirituality. They believe in spirits of the living and of the dead, but they do not extend the category of spirit to the being who can go everywhere and do everything, and who, as a rule, inhabits a world of his own above the sky. Save that he is, by some tribes, obeyed; that dances are performed in his honour; that his effigy is made, on some religious occasions, and destroyed when the rites are ended; that the tribal rites are under the auspices of himself or of his deputy; that his name is invoked at the rites—he has usually no cult, and even this amount of cult is rather infrequent. Yet my own conception of religion does not regard a tribe with such a non-spiritual All Father as without religion. He comes under my idea of religion—in germ or in decadence, as the case may be.

Transfer to such a being the idea of spirituality, approach him with prayer or with sacrifice, and he would, by most people, be called a "god." I do not call him a god, but merely an element in religious belief, though there are definitions of religion which exclude him, while admitting, as a factor in religion, a man's grandfather's ghost—at least, if food is placed on the grave. If you define religion as the belief in spirits, or in divinised living men, to whom folk give gifts that they may receive gifts in return, the All Father, who is not envisaged as a spirit, but merely as a potent *being*, and who receives no gifts, and is asked for none, does not come under your definition of religion. Whether you can wisely afford to ignore such a being is another question. If you do, you have an easier task in looking for the origin of religion, as we shall see; but you leave out of sight what may be a very important factor.

The difficulty of defining religion also presents itself when we consider totemism. However the totemistic belief and body of customs may have arisen—whether it was, at first, a mere way

savour of wrong-headedness in each case—but it is questionable if the one is either a bit better, or a bit worse, than the other. The old protectionist theory is the doctrine of trades unions as applied by the squires, and the modern trades unionism is the doctrine of the squires applied by the artisans. Why should we be worse off under one *game* than under the other?

## LXXXVIII

The life, the fortune, and the happiness of every one of us, and, more or less, of those who are connected with us, do depend upon our knowing something of the rules of a game infinitely more difficult and complicated than chess. It is a game which has been played for untold ages, every man and woman of us being one of the two players in a game of his or her own. The chessboard is the world, the pieces are the phenomena of the universe, the rules of the game are what we call the laws of Nature. The player on the other side is hidden from us. We know that his play is always fair, just and patient. But also we know, to our cost, that he never overlooks a mistake, or makes the smallest allowance for ignorance. To the man who plays well, the highest stakes are paid, with that sort of overflowing generosity with which the strong shows delight in strength. And one who plays ill is checkmated—without haste, but without remorse.

## LXXXIV

Education is the instruction of the intellect in the Laws of Nature, under which name I include not merely things and their forces, but men and their ways; and the fashioning of the affections and of the will into an earnest and loving desire to move in harmony with those laws.

## LXXXV

To every one of us the world was once as fresh and new as to Adam. And then, long before we were susceptible of any

other mode of instruction, Nature took us in hand, and every minute of waking life brought its educational influence, shaping our actions into rough accordance with Nature's laws, so that we might not be ended untimely by too gross disobedience. Nor should I speak of this process of education as past for any one, be he as old as he may. For every man the world is as fresh as it was at the first day, and as full of untold novelties for him who has the eyes to see them. And Nature is still continuing her patient education of us in that great university, the universe, of which we are all members—Nature having no Test-Acts.

## LXXXVI

Those who take honours in Nature's university, who learn the laws which govern men and things and obey them, are the really great and successful men in this world. The great mass of mankind are the "Poli," who pick up just enough to get through without much discredit. Those who won't learn at all are plucked: and then you can't come up again. Nature's pluck means extermination.

## LXXXVII

Ignorance is visited as sharply as wilful disobedience—incapacity meets with the same punishment as crime. Nature's discipline is not even a word and a blow, and the blow first; but the blow without the word. It is left to you to find out why your ears are boxed.

## LXXXVIII

All artificial education ought to be an anticipation of natural education.

## LXXXIX

That man, I think, has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable

## THEORIES OF THE ORIGINS OF RELIGION

of naming alien human groups (as I suppose), or whether it arose from the doctrine of spirits (as in Mr. Frazer's latest theory)—it has at least associations and relations with religion in just so far as it implies a mystic and supersensual or transcendental relation, with duties on either side, between a man and his totem; while it probably accounts for certain attributes of deities in more advanced civilisations, as in that of Egypt, and, in some instances, accounts for animal-worship.

Recently a new element in, or bordering on, religion among backward races has attracted much attention. There are, in some North American, Melanesian, Australian, African, and other languages, such words as *mana* (Melanesian), *wakan* (Dakotah), *orenda* (Huron), and *kutchi* (Australian), and so forth, which mean "what inspires awe," or mean "mystic power," or the vehicle, or *milieu*, or atmosphere, of "mystic power"—much like our "ether" in physical science. A man has much or little *mana*—"he has the power," as used to be said in Scotland; he is potent, somehow. One can scarcely call this conception, so far, "religious." *Mana* or *wakan* is conceived as something like ether, something in the nature of things. People began, I presume, by working magic on the lines of "sympathy." Similar things, they held, have similar effects—like influences like. A man may be injured by injuring an image or picture of him; as also by injuring something once part of him—parings of his nails, a lock of his hair; or by deft use of something essentially his, such as his name; or, sometimes, by destroying "to his intention" an object of the species of his totem. These things people would do, and would believe that they more or less succeeded. Indeed, they would often succeed in evil magic or love-magic by "suggestion." The man aimed at, knowing that he is being bewitched, may sicken and die of fear; the woman

who knows that love-magic is being worked for her may fall in love.

One would call these ideas and practices "magical," not "religious." On this point there is fairly general agreement. No *personal* power is invoked, no prayer is made; and, as long as this is so, the practices are magical. Whether they become religious when a spirit is invoked to aid is a question of definition. But many backward peoples have speculated on the *causa causans*, and the mode of operation, of magic. They want to get at the metaphysics of it, and have decided that in magic there is a kind of ether, or *milieu*, in which, and by virtue of which, the processes work. It is *mana*, *wakan*, *orenda*, and so forth. It is power, *rapport*, it may attach to men, or to strange odd things, queer stones, shells, roots, mountains, or to incarnate spirits, never human, or to ghosts of the dead, or to gods; but it is also a thing in itself, is subtle, impalpable, all-pervading power. A curious little modern example occurs in Perrault's tale of *Blue Beard*. The key of Blue Beard's chamber "was *fee*"; it was no ordinary key, it had *mana*. *Mana*, or *orenda*, or *wakan*, or *kutchi*, has much the same sense as Reuss, quoted by Professor Huxley, attributes to the Hebrew term *Elohim*, which "expresses something divine—that is to say, superhuman, commanding respect and terror," and is applied to spirits, and to God.<sup>1</sup>

If these ideas are correct, *Elohim* originally has much the same wide sense as *mana*, *kutchi*, or *mulungu* in East Africa. But, while gods, like many other things and people, participate in *mana*, all that has *mana* is not a god, nor is *mana*, in itself, usually regarded as divine, or even as personal. Among the Dakotah, however, prayers, often

<sup>1</sup> Huxley, "The Evolution of Theology (Science and Hebrew Tradition, p. 298). Other analogous interpretations are given of *Elohim*. There are, I think, seven philological guesses at the original sense of the word, as far as Hebrew dictionaries show.

of ; whose intellect is a clear, cold, logic engine, with all its parts of equal strength and in smooth working order ; ready, like a steam engine, to be turned to any kind of work, and spin the gossamers as well as forge the anchors of the mind ; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations ; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience ; who has learned to love all beauty, whether of Nature or of art, to hate all vulgarity, and to respect others as himself.

## XC

The only medicine for suffering, crime, and all the other woes of mankind, is wisdom.

## XCI

Next to being right in this world, the best of all things is to be clearly and definitely wrong, because you will come out somewhere. If you go buzzing about between right and wrong, vibrating and fluctuating, you come out nowhere ; but if you are absolutely and thoroughly and persistently wrong, you must, some of these days, have the extreme good fortune of knocking your head against a fact, and that sets you all straight again.

## XCII

No man ever understands Shakespeare until he is old, though the youngest may admire him, the reason being that he satisfies the artistic instinct of the youngest and harmonises with the ripest and richest experience of the oldest.

## XCIII

It is not a question whether one order of study or another should predominate. It is a question of what topics of education you shall select which will combine all the needful elements in such due proportion as

to give the greatest amount of food, support and encouragement to those faculties which enable us to appreciate truth, and to profit by those sources of innocent happiness which are open to us, and, at the same time, to avoid that which is bad, and coarse, and ugly, and keep clear of the multitude of pitfalls and dangers which beset those who break through the natural or moral laws.

## XCIV

Writing is a form of drawing ; therefore if you give the same attention and trouble to drawing as you do to writing, depend upon it, there is nobody who cannot be made to draw, more or less well. . . . I do not say for one moment you would make an artistic draughtsman. Artists are not made ; they grow. . . . You can teach simple drawing, and you will find it an implement of learning of extreme value. I do not think its value can be exaggerated, because it gives you the means of training the young in attention and accuracy, which are the two things in which all mankind are more deficient than in any other mental quality whatever.

## XCV

If a man cannot get literary culture of the highest kind out of his Bible, and Chaucer, and Shakespeare, and Milton, and Hobbes, and Bishop Berkeley, to mention only a few of our illustrious writers—I say, if he cannot get it out of those writers, he cannot get it out of anything ; and I would surely devote a very large portion of the time of every English child to the careful study of the models of English writing of such varied and wonderful kind as we possess, and, what is still more important and still more neglected, the habit of using that language with precision, with force, and with art.

## XCVI

I fancy we are almost the only nation in the world who seem to think that composition comes by nature. The French attend

a sublime character, are addressed to *Wakan*, which, as capable of being affected by prayer, is clearly as personal in this instance as powerful, and surely is "something very like a god," though the word *wakan* is also applied in its usual senses.<sup>1</sup>

As soon as prayer for the fulfilment of Wakan's will is addressed to Wakan, as it is, we may, I think, regard the prayer as religious, and distinct from, say, burning a man's hair with an eye to making him have a headache, in which operation *wakan* is only the hypothetical ether that conveys the physical effect. We do not know whether the personal Wakan, addressed in prayer, is a personification of *wakan* in general (in which case a god has been evolved in an interesting way, well deserving attention), or whether the *Dacotah* have otherwise attained to the conception of a god, distinguished as *Wakan*, "the Powerful One." But this case is, apparently, of an unusual class; we hear of no worship of *Orenda*, or *Mana*, or *Kutchi*.

Meanwhile a god may be Wakan, but all things *wakan* are not gods. In the same way a ghost, as of Samuel, might be spoken of as Elohim, but it would not follow that Elohim, *par excellence*, had once been a ghost.<sup>2</sup> Taking, for the sake of argument, Elohim as equivalent to *mana*, *orenda*, *wakan*, the highest deity of which the mind can conceive.

<sup>1</sup> Miss Fletcher, *The Import of the Totem*. Salem Press, Mas., 1897.

<sup>2</sup> There is a good account of *mana* in Bishop Codrington's book, *The Melanesians*. See, on the whole subject, Hubert and Mauss, *Théorie Générale de la Magie* (*L'Année Sociologique*, 1904, pp. 107-22). Cf. Hewitt, *American Anthropologist*, 1902, vol. iv., chap. i., pp. 32-46. The Algonquin *Manitou* is a term of the same sort; it is usually translated "medicine"—a man has "great medicine"—that is, *mana*; while spirits are called *manitou*, and we hear of "the Great Manitou," or supreme being. The French writers do not appear to remark on Wakan as a personal being, addressed in prayer; and, as I understand Miss Fletcher, she does not recognise that prayer can be addressed only to a being conceived as personal.

has, in a supreme degree, the quality of everything else which is *mana*, and is *Mana* (or Elohim?) *par excellence*. But how men came to conceive of such a deity is a question variously answered.

I have not offered a definition of religion, because none that has been given satisfies all thinkers, or is likely to satisfy. But, in a general way, I have tried to show what I myself mean by religion, and that I regard as religious the honours paid by some races to "the most sacred majesty" of their living king, who appears to be looked on as especially rich in *mana* or transcendental power. I also consider as religious all propitiation of spirits, whether of dead men or of spirits that never were incarnated; all worship of spiritual gods, and all belief in a superior or supreme being not regarded, or not explicitly described, as spiritual, whether the belief is expressed in cult or not.

This is rather a description than a definition of what I mean by religion, and it does not include "the Religion of Humanity," mainly because nobody thinks that the original form of religion.

(2) Our second great difficulty is that we cannot possibly go back to the beginning of things, and see man at the stage in which the first germs of religion become apparent in him. They may have been wonder, astonishment, awe, sense of weakness, sense of ignorance, sense of power, sense of vitality, and of personality; but these emotions can scarcely have produced religion till man began to speculate on them, and on what awakened them; to ask himself for a reasonable account of them, and of himself; and to brood on the ideas of power and of personality. He was conscious of power in himself, of animation, of personality, of using things, of making things, of love and hatred. He made experiments in "sympathetic magic," and persuaded himself that they were successful; that some men were more successful than others; and he evolved the idea of *mana*, of transcendental power, not merely physical and muscular.

to their own language, the Germans study theirs ; but Englishmen do not seem to think it is worth their while.

## XCVII

Many of the faults and mistakes of the ancient philosophers are traceable to the fact that they knew no language but their own, and were often led into confusing the symbol with the thought which it embodied.

## XCVIII

If the time given to education permits, add Latin and German. Latin, because it is the key to nearly one-half of English and to all the Romance languages ; and German because it is the key to almost all the remainder of English, and helps you to understand a race from whom most of us have sprung, and who have a character and a literature of a fateful force in the history of the world, such as probably has been allotted to those of no other people, except the Jews, the Greeks, and ourselves.

## XCIX

In an ideal University, . . . the force of living example should fire the student with a noble ambition to emulate the learning of learned men, and to follow in the footsteps of the explorers of new fields of knowledge. And the very air he breathes should be charged with that enthusiasm for truth, that fanaticism of veracity, which is a greater possession than much learning ; a nobler gift than the power of increasing knowledge ; by so much greater and nobler than these, as the moral nature of man is greater than the intellectual ; for veracity is the heart of morality.

## C

Do what you can to do what you ought, and leave hoping and fearing alone.

## CI

On the face of the matter, it is absurd to ask whether it is more important to know

the limits of one's powers ; or the ends for which they ought to be exerted ; or the conditions under which they must be exerted. One may as well inquire which of the terms of a Rule of Three sum one ought to know in order to get a trustworthy result. Practical life is such a sum, in which your duty multiplied into your capacity, and divided by your circumstances, gives you the fourth term in the proportion, which is your deserts, with great accuracy.

## CII

Books are the money of Literature, but only the counters of Science.

## CIII

Medicine was the foster-mother of Chemistry, because it has to do with the preparation of drugs and the detection of poisons ; of Botany, because it enabled the physician to recognise medicinal herbs ; of Comparative Anatomy and Physiology, because the man who studied Human Anatomy and Physiology for purely medical purposes was led to extend his studies to the rest of the animal world.

## CIV

A thorough study of Human Physiology is, in itself, an education broader and more comprehensive than much that passes under that name. There is no side of the intellect which it does not call into play, no region of human knowledge into which either its roots, or its branches, do not extend ; like the Atlantic between the Old and the New Worlds, its waves wash the shores of the two worlds of matter and of mind ; its tributary streams flow from both ; through its waters, as yet unfurrowed by the keel of any Columbus, lies the road, if such there be, from the one to the other ; far away from that North-west Passage of mere speculation, in which so many brave souls have been hopelessly frozen up.

Man must have speculated thus, under the stress of a need for answers to his own curiosity about himself and the world, before he could begin to be definitely religious. His wonder, fear, awe, curiosity, and so on, were faculties tending towards the evolution of religion; but before they had been reasoned upon by man they could not crystallise into conscious religion. Our difficulty is to find any people about which we can say with certainty that its emotions and reflections have, so far, failed to produce religion. I am not affirming or denying the existence of a wholly irreligious race; but, if we find it, are we certain that it never had a religion in the past?

In Australia, as is well known, where culture is on the lowest level extant, some tribes have the "All Father" belief, already described; others apparently do not possess it. These tribes do not pray to higher powers; they think their own magic sufficient. They have no idea of a future, of rewards and punishments, elsewhere; not that their spirits are mortal, but that they are constantly reincarnated on earth. The best type of these tribes are the Arunta of Central Australia, as known to Messrs. Spencer and Gillen.<sup>1</sup> But among the Arunta of another adjacent region, as among the neighbouring Loritja tribe, to the west, Mr. Strehlow finds All Fathers, Altjira and Tukura;<sup>2</sup> while among the Kaitish, also in contact with the Arunta, Messrs. Spencer and Gillen find a sky-dwelling, self-created being, Atnatu, who is credited with making the beginning of things, being the father of men, and with instituting rites, and punishing mortals who neglect them. As all these tribes are on the same level of physical culture, it is impossible for us to say dogmatically that the Arunta, and tribes equally All Fatherless, have never attained to so much religion as is implied in that belief. They may never have done so; or, again, they may have done so, and

dropped a creed inconsistent with their actual philosophy—which is that of evolution, with some assistance from self-created beings named *Ungambikula*. To them and their philosophy I shall return.

Attempts have been made to find equations between the physical environment of tribes with or without the All Father belief, on the one hand; and the presence or absence of the belief, on the other hand. But these equations are unsatisfactory. If, as is asserted, coastal conditions, sufficient rains, food enough, tend to produce the All Father belief, how has it arrived among the Kaitish, Loritja, and Mr. Strehlow's Arunta, who are as remote as may be from the coast, dwelling in the plumb centre of Australia? Again, if coastal conditions and better and more abundant food are the conditions of the growth of the All Father belief, why have they not produced it among the Anula and Mara, northern coastal tribes visited by Messrs. Spencer and Gillen, or among the Torres Straits islanders, described by Mr. Hudson, north of Australia? These explorers find no such tenet among Torres Straits Islanders, or the Mara and Anula, or any other northern coastal tribe. In the South-East of Australia Mr. Howitt finds the belief among tribes with female and tribes with male descent, tribes near the sea and tribes remote from the sea. Thus we have the alleged coastal cause without the religious effect, and the religious effect without the alleged coastal cause.

In these circumstances we can only note the facts, and await further information. We cannot go back to the beginnings, even among a people so low in culture, yet so speculative, as the dusky natives of Australia. Speculation seems to have led some great aggregates of tribes to a theory of evolution, *plus* reincarnated spirits, and the *Ungambikula*. Other tribes, even tribes adjacent to these, have been led by speculation to belief in beings like Atnatu, self-created, deathless, and more or less

<sup>1</sup> *Native Tribes of Central Australia.*

<sup>2</sup> *Globus*, XCI. (1907), No. 18.

CV

You know that among the Bees, it depends on the kind of cell in which the egg is deposited, and the quantity and quality of food which is supplied to the grub, whether it shall turn out a busy little worker or a big idle queen. And, in the human hive, the cells of the endowed larvæ are always tending to enlarge, and their food to improve, until we get queens, beautiful to behold, but which gather no honey and build no comb.

CVI

Examination, like fire, is a good servant but a bad master; and there seems to me to be some danger of its becoming our master. I by no means stand alone in this opinion. Experienced friends of mine do not hesitate to say that students whose career they watch appear to them to become deteriorated by the constant effort to pass this or that examination, just as we hear of men's brains becoming affected by the daily necessity of catching a train. They work to pass, not to know; and outraged Science takes her revenge. They do pass, and they don't know.

CVII

A man's worst difficulties begin when he is able to do as he likes.

CVIII

There is but one right, and the possibilities of wrong are infinite.

CIX

It is given to few to add to the store of knowledge, to strike new springs of thought, or to shape new forms of beauty. But so sure as it is that men live not by bread, but by ideas, so sure is it that the future of the world lies in the hands of those who are able to carry the interpretation of nature a step further than their predecessors.

CX

Size is not grandeur, and territory does not make a nation.

CXI

Whatever practical people may say, this world is, after all, absolutely governed by ideas, and very often by the wildest and most hypothetical ideas. It is a matter of the very greatest importance that our theories of things, and even of things that seem a long way apart from our daily lives, should be as far as possible true, and as far as possible removed from error.

CXII

All truth, in the long run, is only common sense clarified.

CXIII

You may read any quantity of books, and you may be almost as ignorant as you were at starting, if you don't have, at the back of your minds, the change for words in definite images which can only be acquired through the operation of your observing faculties on the phenomena of nature.

CXIV

The saying that a little knowledge is a dangerous thing is, to my mind, a very dangerous adage. If knowledge is real and genuine, I do not believe that it is other than a very valuable possession, however infinitesimal its quantity may be. Indeed, if a little knowledge is dangerous, where is the man who has so much as to be out of danger?

CXV

Patience and tenacity of purpose are worth more than twice their weight of cleverness.

CXVI

The body is a machine of the nature of an army. . . . Of this army each cell is a soldier, an organ a brigade, the central

paternal in their relations to mankind. Which of the two doctrines is the earlier is matter for conjecture and later discussion.

It is denied by none that a belief in spirits is universal, and that the belief is a most potent factor in the evolution of religion. It is commonly called Animism, or, by Mr. Herbert Spencer, the Ghost Theory. Anthropologists differ as to whether or not animism is the one and only source of religion. While some (1), like Mr. Tylor and Mr. Spencer, have maintained this view, others (2) hold that religions may have existed, and, indeed, exist, not based on animism, though the men who hold these religions believe in spirits. People may believe in spirits, without worshipping or propitiating them; their religious belief may be unspiritual, destitute of spiritual origin. None the less, spiritualism is likely, in course of time, to invade, and perhaps to overthrow, the belief in the superior being of the non-spiritual faith.

My own opinion is in favour of this second theory, which may be called a kind of anthropological heresy, so prevalent is the view maintained by the vast learning and sober judgment of Mr. Tylor. My hypothesis was thrust upon me by the facts of religion, as I seemed to discern them.

Let us take a popular exposition of the doctrine of animism as the source of religion. Professor Huxley has bequeathed to us an essay styled "The Evolution of Theology: An Anthropological Study."<sup>1</sup> Writing before 1895, Mr. Huxley was unacquainted with many facts since brought to general notice, though even in his time these facts, in less abundant measure, were familiar to all who cared to look for them; for example, to the great German anthropologist, Waitz.<sup>2</sup> Mr. Huxley began not with an examination of the facts of religion among backward peoples, but by scrutinising what he called "the

fossiliferous strata of the Old Testament." He meant such books as Judges and Samuel, which he regarded as containing archaic matter, "fossils," and as comparatively free from "late interpolation and editorial trimming." He found "an important fossil" in the story of the Witch of Endor (1 Samuel xxviii.). Here we learn that Saul, receiving no information from "Jahveh" by dreams, "by Urim" (whatever that may be), "or by prophets," took what he himself thought a heterodox course; and, though he had banished mediums (such as "have familiar spirits"), consulted a woman who had what spiritualists style a "control." Orthodoxy regarded the Supreme Being, Jahveh, as the only proper source of supernormal information. Jahveh being hostile, another source, a familiar spirit and a medium, had to be approached.

*"Flectere si nequeo superos, Acheronta movebo"* ("If I cannot bend the high powers, I will stir hell"), thought Saul. Saul, however, did not really think of "higher powers," but of one high power, Jahveh. If the passage be not "a late interpolation," Israel already believed in a Supreme Being. Saul (who, though in disguise, was "kenspeckle," being by far the tallest man in his kingdom), approaches the witch, who asks, "Whom shall I bring up to thee?" "Samuel," says the king. She can scarcely have been in the way of saying that her "control," as the mediums call it, was the spirit of Samuel! When the woman saw Samuel, she cried: "Why hast thou deceived me, for thou art Saul?" Shall we say that the woman had, *subconsciously*, detected Saul, and that her knowledge was automatically brought into *her ordinary consciousness* by a hallucinatory phantasm of Samuel? In any case, the king said: "Be not afraid, for what sawest thou?" Saul was not hallucinated; he saw nothing. The woman replied, "I saw Elohim ascending out of the earth." (By "Elohim," here, I understand her to have meant *manitou*, a shape of power and dread.) Her description of

nervous system headquarters and field telegraph, the alimentary and circulatory system, the commissariat. Losses are made good by recruits born in camp, and the life of the individual is a campaign, conducted successfully for a number of years, but with certain defeat in the long run.

## CXXVII

So far as the laws of conduct are determined by the intellect, I apprehend that they belong to science, and to that part of science which is called morality. But the engagement of the affections in favour of that particular kind of conduct which we call good, seems to me to be something quite beyond mere science. And I cannot but think that it, together with the awe and reverence, which have no kinship with base fear, but arise whenever one tries to pierce below the surface of things, whether they be material or spiritual, constitutes all that has any unchangeable reality in religion.

## CXXVIII

Just as I think it would be a mistake to confound the science, morality, with the affection, religion; so do I conceive it to be a most lamentable and mischievous error, that the science, theology, is so confounded in the minds of many—indeed, I might say, of the majority of men.

## CXXIX

My belief is, that no human being, and no society composed of human beings, ever did, or ever will, come to much, unless their conduct was governed and guided by the love of some ethical ideal.

## CXX

Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do, when it ought to be done, whether you like it or not; it is

the first lesson that ought to be learned; and, however early a man's training begins, it is probably the last lesson that he learns thoroughly.

## CXXI

The great end of life is not knowledge, but action. What men need is, as much knowledge as they can assimilate and organise into a basis for action; give them more and it may become injurious. One knows people who are as heavy and stupid from undigested learning as others are from over-fullness of meat and drink.

## CXXII

There is no mode of exercising the faculty of observation and the faculty of accurate reproduction of that which is observed, no discipline which so readily tests error in these matters, as drawing properly taught. And by that I do not mean artistic drawing; I mean figuring natural objects. I do not wish to exaggerate, but I declare to you that, in my judgment, the child who has been taught to make an accurate elevation, plan and section of a pint pot has had an admirable training in accuracy of eye and hand.

## CXXIII

Accuracy is the foundation of everything else.

## CXXIV

Anybody who knows his business in science can make anything subservient to that purpose. You know it was said of Dean Swift that he could write an admirable poem upon a broomstick, and the man who has a real knowledge of science can make the commonest object in the world subservient to an introduction to the principles and greater truths of natural knowledge.

## CXXV

My experience of the world is that things left to themselves don't get right.

## THEORIES OF THE ORIGINS OF RELIGION

what she saw, an old man in a cloak, persuaded Saul that Samuel was present, and a conversation ensued. Mr. Huxley held, and probably with reason, that the woman did the speaking, as Mrs. Piper does; Dr. Phinuit, Samuel, or any other "control," using her vocal organs. Mr. Huxley, accepting the narrative as veracious "as far as the intention of the narrator goes," draws his inferences as to theology in the time of the narrator. Men believed that the spirits of the dead, under the control of Jahveh, went to Sheol, their own place, as in the song of Hannah:—

Jahveh killeth and maketh alive;  
He bringeth down to Sheol, and bringeth up.  
—*1 Samuel ii. 6.*

The songs in the Old Testament are, I believe, regarded as old; if so, the belief in Jahveh, with his power over spirits, is old. We may compare Samuel in Sheol to the Theban prophet, Teiresias, in Hades—in the *Odyssey*. Teiresias alone retains all his faculties, knows what is occurring on earth (the other spirits in Homer's Hades do not), and Teiresias also retains his faculty of precognition; he foretells events. (Mr. Huxley does not remark on this curious parallel.)

Mr. Huxley justly concludes that the Hebrews believed in the continued existence of spirits (at the time when the narrative was written), but had no idea of retribution, any more than Homer; indeed, not so much. The notion of retribution, however, is common among Australian tribes, infinitely less civilised than the Israelites of the age of iron and of writing.

Mr. Huxley next discusses, as we saw, the meaning of *Elohim*, quoting Reuss, Tuch, Thenius, and Dr. Kitto's Dictionary. *Elohim* is "something superhuman, commanding terror and respect," and, though the word is plural, in Mr. Huxley's opinion here it means "a solitary spectre"; Saul asks "what form is he of?"

It is important, Mr. Huxley says, "that the name of *Elohim* is applied to a ghost or a disembodied soul" as well as

to the gods of the heathen, while Jahveh is "a species of the genus" to which ghosts belong.

It is precisely here that I venture to differ from Mr. Huxley. The name Elohim is more extensive than the species ghost. Ghosts are Elohim—*mana*, *wakan*, *orenda*, *kutchi*—things of mystic and dread potency—and Jahveh is of the same category, so far. But it does not follow that Jahveh was originally a ghost. Anything that has *mana*—even an odd stone or a strange bird—is *mana*, *wakan*, *elohim*, but is not and never was a ghost. By parity of reasoning, Jahveh need not have been originally envisaged as a spirit; but, like the Australian All Fathers—Baiame, Atnatu, Mungan-ngaua (Our Father), Mulkari, Nurrundere, Pirnmeheal, and so on—as a Being, anthropomorphic, deathless, a maker of things, a ruler, a father.

On the anthropomorphic aspect of Jehovah Mr. Huxley insists with justice. In early Israel Jahveh was certainly regarded as anthropomorphic, just as Baiame is so regarded. But there appears no reason for supposing that Jahveh, any more than Atnatu or Baiame, was originally looked on either as a spirit or as a ghost. The oldest parts of the Old Testament never speak of him as a spirit.

Both as named "Elohim" and as named "Jahveh," the Supreme Being of Israel received sacrifices. In this he differs, not only from the All Fathers in Australia, but from almost all of the countless supreme beings (or superior beings) whom we find in the background of the religions of polytheistic and animistic peoples, Melanesian, African, American, unchristianised Finns, and so on. Among these peoples such beings—the Finnish Ukko, the African Nzambe, the Red Indian Atahocan, the Melanesian Harisu, or Konori, or Man-seran Nangi—stand apart; they receive no gifts. This is the most common feature of these beings in the religions of peoples who sacrifice to minor gods and spirits. Here Jahveh differs from

## CXXVI

I remember somewhere reading of an interview between the poet Southey and a good Quaker. Southey was a man of marvellous powers of work. He had a habit of dividing his time into little parts each of which was filled up, and he told the Quaker what he did in this hour and that, and so on through the day until far into the night. The Quaker listened, and at the close said "Well, but, friend Southey, when dost thee think?"

## CXXVII

The knowledge which is absolutely requisite in dealing with young children is the knowledge you possess, as you would know your own business, and which you can just turn about as if you were explaining to a boy a matter of everyday life.

## CXXVIII

You may develop the intellectual side of people as far as you like, and you may confer upon them all the skill that training and instruction can give; but, if there is not underneath all that outside form and superficial polish, the firm fibre of healthy manhood and earnest desire to do well, your labour is absolutely in vain.

## CXXIX

Our sole chance of succeeding in a competition, which must constantly become more and more severe, is that our people shall not only have the knowledge and the skill which are required, but that they shall have the will and the energy and the honesty, without which neither knowledge nor skill can be of any permanent avail.

## CXXX

It is a great many years since, at the outset of my career, I had to think seriously what life had to offer that was worth having. I came to the conclusion

that the chief good, for me, was freedom to learn, think, and say what I pleased when I pleased. I have acted on that conviction, and have availed myself of the "rara temporum felicitas ubi sentire quæ velis, et quæ sentias dicere licet," which is now enjoyable, to the best of my ability; and though strongly, and perhaps wisely, warned that I should probably come to grief, I am entirely satisfied with the results of the line of action I have adopted

## CXXXI

The scientific imagination always restrains itself within the limits of probability.

## CXXXII

It is a "law of nature," verifiable by everyday experience, that our already formed convictions, our strong desires, our intent occupation with particular ideas, modify our mental operations to a most marvellous extent, and produce enduring changes in the direction and in the intensity of our intellectual and moral activities.

## CXXXIII

Men can intoxicate themselves with ideas as effectually as with alcohol or with baug, and produce, by dint of intense thinking, mental conditions hardly distinguishable from monomania.

## CXXXIV

Demoniac possession is mythical; but the faculty of being possessed, more or less completely, by an idea is probably the fundamental condition of what is called genius, whether it show itself in the saint, the artist, or the man of science. One calls it faith, another calls it inspiration, a third calls it insight; but the "intending of the mind," to borrow Newton's well-known phrase, the concentration of all the rays of intellectual energy on some one

them, and it may be suggested that, in his case, sacrifice was a relatively late and borrowed addition to his cult, for among Australians the All Father receives no cult, and it is rare that among races who do sacrifice to minor gods and spirits the Supreme Being receives any gifts. But early Israel dwelt among peoples greatly given to sacrifice.

When Mr. Huxley wrote, the All Father of savage tribes had received little attention from students, and the supreme beings of Africa, America, Melanesia, and other places, had been studied but sketchily. Anthropology blinds them!

There is very little, if any, trace of offerings to the ghosts of the dead, in Israel. Mr. Huxley explains this by the care of late monotheistic editors, violently opposed to every kind of idolatry, who would cut out references to the gifts and sacrifices to the dead. But this argument does not hold water, for the monotheistic editors leave in, or even insert, constant objurgations of every form of false religion known to them. The Old Testament is full of such denunciations, and had the worship of ghosts prevailed it would have been condemned with all the other heterodoxies. We do hear of *teraphim*; but, if these were objects of ancestor-worship, they are usually not denounced. Hosea (iii. 4) regards *teraphim* as perfectly orthodox; "appurtenances of the suspended worship of Jahveh," says Mr. Huxley. If they were that, how were they appurtenances of dead men's ghosts? If that worship was orthodox, why should "late monotheistic editors" cut out references to it as heterodox, while they were denouncing all heterodoxies? They did not cut out such references.

Mr. Huxley, seeking light from Canon Farrar, quotes him to the effect that the priests tolerated *teraphim*, while they were denounced by the prophets. But Hosea is an eighth-century, and a very particular, prophet, and he never dreams of barring *teraphim*. "The researches

of the anthropologist lead him to conclusions identical in substance" with those of the Canon; but both the anthropologist and the divine seem utterly at sea!

If "late monotheistic editors are not likely" (because "violently opposed to all kinds of idolatry") "to have selected from the materials at their disposal any obvious reference to" feeding ghosts, and to ancestor-worship, why did they select endless evidence to other heterodox practices? And, if *teraphim* mean ancestor-worship, why did the editors leave in plenty of obvious evidence to ancestor-worship (which it was their alleged design to excise); while, if prophets denounced *teraphim*, why did the prophet Hosea enumerate them among "appurtenances of the suspended worship of Jehovah"? Much later Josiah abolished "the images" (2 Kings xxiii. 24). We do not know that they represented ancestral ghosts.

The truth is that, as far as our information goes, the Israelites, at the date of the books of Samuel and Judges, appear to have regarded the spirits of the dead as they were regarded by the contemporary Achaeans of Homer's time. In Homer's opinion, man has a spirit which survives death, and abides in the meadow of asphodel, and the halls of Hades, among "the strengthless heads of the Dead." Homer never hints at offerings of food to the dead, nor at ancestor-worship, which, before and after his time, was a factor in Aegean and in classical Greek religion. The dead man, in Homer, receives all his dues when his body has been burned and his bones have been interred. After these rites he is powerless; he cannot even appear to the living. If he do not receive these rites, his spirit may, in some fashion not explained, be "a cause of wrath" to the living. The Hebrew ghosts were as impotent in Sheol as those of Achilles and Agamemnon in Hades. There was nothing to be gained by feeding, nothing to be lost, by neglecting to feed them.

point, until it glows and colours the whole cast of thought with its peculiar light, is common to all.

CXXXV

Whatever happens, science may bide her time in patience and in confidence.

CXXXVI

The only people, scientific or other, who never make mistakes are those who do nothing.

CXXXVII

The most considerable difference I note among men is not in their readiness to fall into error, but in their readiness to acknowledge these inevitable lapses.

CXXXVIII

Quite apart from deliberate and conscious fraud (which is a rarer thing than is often supposed), people whose mythopoetic faculty is once stirred are capable of saying the thing that is not, and of acting as they should not, to an extent which is hardly imaginable by persons who are not so easily affected by the contagion of blind faith. There is no falsity so gross that honest men and, still more, virtuous women, anxious to promote a good cause, will not lend themselves to it without any clear consciousness of the moral bearings of what they are doing.

CXXXIX

This modern reproduction of the ancient prophet, with his "Thus saith the Lord," "This is the work of the Lord," steeped in supernaturalism and glorying in blind faith, is the mental antipodes of the philosopher, founded in naturalism and a fanatic for evidence, to whom these affirmations inevitably suggest the previous question: "How do you know that the Lord saith it?" "How do you know that the Lord

doeth it?" and who is compelled to demand that rational ground for belief, without which, to the man of science, assent is merely an immoral pretence.

And it is this rational ground of belief which the writers of the Gospels, no less than Paul, and Eginhard, and Fox, so little dream of offering that they would regard the demand for it as a kind of blasphemy.

CXL

To quarrel with the uncertainty that besets us in intellectual affairs would be about as reasonable as to object to live one's life with due thought for the morrow, because no man can be sure he will be alive an hour hence.

CXII

I verily believe that the great good which has been effected in the world by Christianity has been largely counteracted by the pestilent doctrine on which all the churches have insisted, that honest disbelief in their more or less astonishing creeds is a moral offence, indeed a sin of the deepest dye, deserving and involving the same future retribution as murder and robbery. If we could only see, in one view, the torrents of hypocrisy and cruelty, the lies, the slaughter, the violations of every obligation of humanity, which have flowed from this source along the course of the history of Christian nations, our worst imaginations of Hell would pale beside the vision.

CXLII

Agnosticism, in fact, is not a creed, but a method, the essence of which lies in the rigorous application of a single principle. That principle is of great antiquity; it is as old as Socrates; as old as the writer who said, "Try all things, hold fast by that which is good"; it is the foundation of the Reformation, which simply illustrated the axiom that every man should be able to give a reason for the faith that is in

After discussing the Hebrew ephod, the Ark, and other matters, Mr. Huxley announces that of the whole theological system of Israel, as defined by him, "the ghost theory is the foundation." As has been said, I do not believe that the ghost theory had anything to do with the origin of the Hebrew All Father, Jahveh, any more than the ghost theory accounts for the origin of the Australian All Fathers, Baiame, Mulkari, and the rest. Here I differ from Mr. Huxley and his predecessors and contemporaries, Bossuet, J. G. Müller, Mr. Tylor, and Mr. Herbert Spencer. Here is my heresy! The belief in a non-spiritual supreme All Father certainly exists in many Australian tribes, while neither the tribes who have nor those who lack it feed the ghosts of their dead, unless there be a trace of the practice here and there—for example, among the Dieri.

Mr. Huxley discusses, at length, a Tongan god, Tá-li-y-Tooboo, whose name is translated "Wait There, Too-boo." His domain extends "from the top of the sky to the bottom of the earth." "It is curious to note," says Mr. Huxley, "that many Hebrew philologists have thought the meaning of Jahveh to be best expressed by the word 'eternal'"; and he thinks that Tá-li-y-Tooboo expresses the sense of Eternal as well as the Tongan speech is capable of conveying such an abstract conception. But eternity cannot be predicated of a dead man's ghost. This God had no priest, and was not fed—not even a libation was poured out before him.

As to Australia, Mr. Huxley writes that the whole theology of the tribes "is a mere belief in the existence, powers, and disposition (usually malignant) of ghostlike entities who may be propitiated or scared away; but no cult can properly be said to exist. And, in this stage, theology is wholly independent of ethics." Even the authorities accessible to Mr. Huxley—for example, the great work of Waitz—disproved these statements; and since the publication of

Mr. Howitt's and Mrs. Langloh Parker's books<sup>1</sup> nobody can repeat such assertions. On the other hand, Mr. Huxley admits that "there are very few peoples without additional gods, who cannot, with certainty, be accounted for as deified ancestors."

Mr. Huxley ends with the conclusion "that, like the rest of the world, the Israelites had passed through a period of mere ghost-worship, and had advanced through ancestor-worship, and fetishism, and totemism, to the theological level at which we find them in the books of Judges and of Samuel." From this movement the belief in the All Father is omitted, no doubt because Mr. Huxley had not studied that element in the evolution of religion. Yet it had been studied long before he wrote.

To give an adequate account of Mr. Howitt's observations on the Australian All Fathers, one ought to cite textually his whole chapter on the subject, twenty pages in his *Native Tribes of South East Australia*. One ought also to quote textually his earlier writings on the topic,<sup>2</sup> and compare and criticise the whole. But it must suffice to present, textually, Mr. Howitt's conclusion as set forth in his great work of 1904. It is to be understood that the *Jeraeil* of which he speaks is, or rather was, the ceremony at which the boys of the Kurnai tribe in Gippsland were initiated into the tribal secrets, including the attributes of the All Father, Mungan-ngauna.

Mr. Howitt had long ago received his information from men who had been initiated before 1844, "when Gippsland was settled by the whites." The ideas communicated to them in the ceremony before 1844 could not be the result of missionary teaching, for the missions, as far as Mr. Howitt remembers, were not established till about 1860. Mr. Howitt induced the Kurnai to hold a

<sup>1</sup> *Native Tribes of South East Australia*, and *The Euahlayi Tribe*.

<sup>2</sup> *Journal of Anthropological Institute*, 1884, 1885.

him ; it is the great principle of Descartes ; it is the fundamental axiom of modern science. Positively the principle may be expressed : In matters of the intellect, follow your reason as far as it will take you, without regard to any other consideration. And negatively : In matters of the intellect do not pretend that conclusions are certain which are not demonstrated or demonstrable. That I take to be the agnostic faith, which if a man keep whole and undefiled, he shall not be ashamed to look the universe in the face, whatever the future may have in store for him.

## CXLIII

The best men of the best epochs are simply those who make the fewest blunders and commit the fewest sins.

## CXLIV

That one should rejoice in the good man, forgive the bad man, and pity and help all men to the best of one's ability, is surely indisputable. It is the glory of Judaism and of Christianity to have proclaimed this truth, through all their aberrations. But the worship of a God who needs forgiveness and help, and deserves pity every hour of his existence, is no better than that of any other voluntarily selected fetish. The Emperor Julian's project was hopeful in comparison with the prospects of the Comtist Anthropopathy.

## CXLV

The Cleric asserts that it is morally wrong not to believe certain propositions, whatever the results of a strict scientific investigation of the evidence of these propositions. He tells us "that religious error is, in itself, of an immoral nature." He declares that he has prejudged certain conclusions, and looks upon those who show cause for arrest of judgment as emissaries of Satan. It necessarily follows

that, for him, the attainment of faith, not the ascertainment of truth, is the highest aim of mental life. And, on careful analysis of the nature of this faith, it will too often be found to be, not the mystic process of unity with the Divine, understood by the religious enthusiast ; but that which the candid simplicity of a Sunday scholar once defined it to be. "Faith," said this unconscious plagiarist of Tertullian, "is the power of saying you believe things which are incredible."

## CXLVI

The science, the art, the jurisprudence, the chief political and social theories, of the modern world have grown out of those of Greece and Rome not by favour of, but in the teeth of, the fundamental teaching of early Christianity, to which science, art, and any serious occupation with the things of this world, were alike despisable.

## CXLVII

All that is best in the ethics of the modern world, in so far as it has not grown out of Greek thought or Barbarian manhood, is the direct development of the ethics of old Israel. There is no code of legislation, ancient or modern, at once so just and so merciful, so tender to the weak and poor, as the Jewish law ; and, if the Gospels are to be trusted, Jesus of Nazareth himself declared that he taught nothing but that which lay implicitly, or explicitly, in the religious and ethical system of his people.

## CXLVIII

The first-recorded judicial murder of a scientific thinker was compassed and effected, not by a despot, nor by priests, but was brought about by eloquent demagogues, to whom, of all men, thorough searchings of the intellect are most dangerous and therefore most hateful.

Jeraeil, and, from this point, I quote him word for word :—

When the *Jeracil* was held at my instance, these men conducted them, and they assured me that they did so exactly as "the old men" had done when they themselves were initiated. In answer to inquiries about the legends told at the ceremonies, including that of Mungan-*ngaua* and his son 'Tundun, they said, "The old men told us so."

As to the possibility of this belief having been introduced by blacks from the settled districts of New South Wales and Victoria, it will suffice to say that the Kurnai were isolated from other tribes by the nature of the country surrounding them. Moreover, they did not attend the ceremonies of any other tribe, nor did they receive visitors at theirs.

As to the tribes which have ceremonies of the western type, I must now point out that missions have been in existence in the Narrang-ga, the Parnkalla, the Dieri, and the Arunta tribes for long periods. In all of them, with perhaps the exception of the Narrang-ga, the missionaries have taught and preached in the native language, and, as to the Arunta, have, I believe, evolved a name for the Deity from the term which Spencer and Gillen have given as Alcheringa, or the Alcheringa ancestors. Such being the case, how is it, if we are to assume that the All Father belief in the south-east has been due to missionary teachings, that there has not been a similar adoption of it by the western tribes?

If I am correct in saying that the Kurnai belief in Mungan-*ngaua* is aboriginal, then the similar beliefs of the other coast tribes may also be accepted.

It seems to be usually assumed from the evidences, for instance, of tribes like those of Fiji, that ancestor-worship has been at the root of primitive religions; but Australian evidence seems to carry us back to a stage before ancestors came to be worshipped,<sup>1</sup> although they were looked upon as having been greater and wiser than their descendants, the present race. This is very evident from the account given by Spencer and Gillen of the Arunta and other tribes having kindred beliefs. I find that among the Lake Eyre tribes it was not the ancestors, but

a supernatural human race, antecedent to them, who are seen in myth and tradition to have been similarly superior to their successors. Here there is even less of a possible approach to ancestor-worship than with the Arunta.

In the tribes of South-East Australia the ancestors appear in the guise of totems or theriomorphic human beings, in some respects resembling both the Alcheringa ancestors and the *Mura-muras*. But it must be remembered that in these tribes there has been a clearly-marked advance in the status of society, from group-marriage to a form of individual marriage, from descent in the female to the male line, and from a society organised on the class system to one based on locality. Here, as I have now shown, the tribe living on the earth is represented by the tribe of the dead, living in the sky-country, but also able to visit the earth, and with a headman who is spoken of as "father" by the natives from the Murray mouth, in South Australia, to the Herbert River, in north-eastern Queensland.

In this being, although supernatural, there is no trace of a divine nature. All that can be said of him is that he is imagined as the ideal of those qualities which are, according to their standard, virtues worthy of being imitated. Such would be the man who is skilful in the use of weapons of offence and defence, all-powerful in magic, but generous and liberal to his people, who does no injury or violence to anyone, yet treats with severity any breaches of custom or morality. Such is, according to my knowledge of the Australian tribes, their ideal of headman; and naturally it is that of the Biamban, the master in the sky-country. Such a being, from *Bunjil* to *Baiame*, is *Mami-ngata*—that is, "our father"; in other words, the All-Father of the tribes.

The mental stages by which the conception of the All-Father of the tribe may have been reached in these tribes perhaps commenced with the belief in the existence of the human self-consciousness as a spirit or a ghost, whose home on the earth and in the sky-country was dreamland. This would naturally lead to the belief in the existence of the ancestral ghosts as a tribe like that on the earth, with a headman and medicine-men, its fighting, feasting,

<sup>1</sup> My italics. --A. L.

## CLIX

Platonic philosophy is probably the grandest example of the unscientific use of the imagination extant; and it would be hard to estimate the amount of detriment to clear thinking effected, directly and indirectly, by the theory of ideas, on the one hand, and by the unfortunate doctrine of the baseness of matter, on the other.

## CL.

The development of exact natural knowledge in all its vast range, from physics to history and criticism, is the consequence of the working out, in this province, of the resolution to "take nothing for truth without clear knowledge that it is such"; to consider all beliefs open to criticism; to regard the value of authority as neither greater nor less than as much as it can prove itself to be worth. The modern spirit is not the spirit "which always denies," delighting only in destruction; still less is it that which builds castles in the air rather than not construct; it is that spirit which works and will work "without haste and without rest," gathering harvest after harvest of truth into its barns and devouring error with unquenchable fire.

## CLI

In truth, the laboratory is the fore-court of the temple of philosophy; and whoso has not offered sacrifices and undergone purification there has little chance of admission into the sanctuary.

## CLII

The memorable service rendered to the cause of sound thinking by Descartes consisted in this: that he laid the foundation of modern philosophical criticism by his inquiry into the nature of certainty.

## CLIII

There is no question in the mind of any one acquainted with the facts that, so far

as observation and experiment can take us, the structure and the functions of the nervous system are fundamentally the same in an ape, or in a dog, and in a man. And the suggestion that we must stop at the exact point at which direct proof fails us, and refuse to believe that the similarity which extends so far stretches yet further, is no better than a quibble. Robinson Crusoe did not feel bound to conclude, from the single human footprint that he saw in the sand, that the maker of the impression had only one leg.

## CL.IV

Descartes, as we have seen, illustrates what he means by an innate idea, by the analogy of hereditary diseases or hereditary mental peculiarities, such as generosity. On the other hand, hereditary mental tendencies may justly be termed instincts; and still more appropriately might those special propensities, which constitute what we call genius, come into the same category.

## CL.V

The child who is impelled to draw as soon as it can hold a pencil; the Mozart who breaks out into music as early; the boy Bidder who worked out the most complicated sums without learning arithmetic; the boy Pascal who evolved Euclid out of his own consciousness: all these may be said to have been impelled by instinct, as much as are the beaver and the bee. And the man of genius is distinct in kind from the man of cleverness, by reason of the working within him of strong innate tendencies which cultivation may improve, but which it can no more create than horticulture can make thistles bear figs. The analogy between a musical instrument and the mind holds good here also. Art and industry may get much music, of a sort, out of a penny whistle; but, when all is done, it has no chance against an organ. The innate musical potentialities of the two are infinitely different.

and dancing. From this it is not a long stretch to the idea of the All-Father of the tribe, since it is not uncommon—indeed, I may go so far as to say that it is, in my experience, common—to address the elder men as father. Such seems to me the probable course of development of this belief, which, moreover, I am satisfied has been locally evolved, and not introduced from without. But in saying this I must guard myself from being thought to imply any primitive revelation of a monotheistic character. What I see is merely the action of elementary thought reaching conclusions such as all savages are capable of, and which may have been at the root of monotheistic beliefs.

But all this does not bring us to the worship of the ancestor.

Although it cannot be alleged that these aborigines have, consciously, any form of religion, it may be said that their beliefs are such that, under favourable conditions, they might have developed into an actual religion, based on the worship of *Mungan-ngauna* or *Baiame*.

There is not any worship of Daramulun, but the dances round the figure of clay and the invocating of his name by the medicine-men certainly might have led up to it.

If such a change as a recognised religion had ever become possible, I feel that it would have been brought about by those men who are the depositaries of the tribal beliefs, and by whom, in the past, as I think, all the advances in the organisation of their society have been effected. If such a momentous change to the practice of religion had ever occurred, those men would have readily passed from being medicine-men to the office of priests.

The important things to note in this long quotation are: (1) That in Mr. Howitt's opinion "the Kurmai belief in *Mungan-ngauna* is aboriginal," and that, "if so, the similar beliefs of the other coast tribes may also be accepted" (as aboriginal). Once more, if all this be correct, the similar beliefs of the tribes *remote from the coast*, as in the north of New South Wales, may (in my opinion) also be regarded as aboriginal, and not borrowed from the whites.

(2) Mr. Howitt thinks that Australian

evidence seems "to carry us back to a stage before ancestors came to be worshipped."

(3) "It must be remembered that" (in the tribes of South-East Australia) "there has been a clearly marked advance in the status of society, from group marriage to a form of individual marriage, from descent in the female to the male line, and from a society organised on the class system to one based on locality."

Mr. Howitt appears to intend us to understand that the South-Eastern tribes have advanced to the All-Father belief *pari passu* with an advance to a higher social organisation. But he himself shows that many of the South-Eastern tribes, with an All Father, do not reckon descent in the female line, and live in "a society organised on the class system, and not based on locality."<sup>1</sup> He does not mean (as he might readily be supposed to mean) to deny these facts in the passage quoted.

On the other hand (save among the Dieri and Urabunna tribes near Lake Eyre, and their congeners), the South-East tribes, with an All Father, like the central and northern tribes without an All Father, have "a form of individual marriage." The only tribes who have what Mr. Howitt calls "group marriage" are the Dieri and Urabunna, as aforesaid. Their "group marriage" is a legalised system like that which Sir George Mackenzie, about 1678, attributes to the tinkers in Scotland. In punishing adultery among them, says Sir George, some lenity is extended by Scottish law, "and some respect was likewise had here to that absurd custom among tinkers of living promiscuously and using one another's wives as concubines."<sup>2</sup>

The Dieri and Urabunna "use each other's wives as concubines" (*pirrauru*). The custom is legalised, and, at least in

<sup>1</sup> *Native Tribes of South East Australia*, pp. 97-105.

<sup>2</sup> Mackenzie, *Works*, vol. ii., p. 120; 1722.

## CLVI

It is notorious that, to the unthinking mass of mankind, nine-tenths of the facts of life do not suggest the relation of cause and effect ; and they practically deny the existence of any such relation by attributing them to chance. Few gamblers but would stare if they were told that the falling of a die on a particular face is as much the effect of a definite cause as the fact of its falling ; it is a proverb that "the wind bloweth where it listeth" ; and even thoughtful men usually receive with surprise the suggestion, that the form of the crest of every wave that breaks, wind-driven, on the sea-shore, and the direction of every particle of foam that flies before the gale, are the exact effects of definite causes ; and, as such, must be capable of being determined, deductively, from the laws of motion and the properties of air and water. So again, there are large numbers of highly intelligent persons who rather pride themselves on their fixed belief that our volitions have no cause ; or that the will causes itself, which is either the same thing, or a contradiction in terms.

## CLVII

To say that an idea is necessary is simply to affirm that we cannot conceive the contrary ; and the fact that we cannot conceive the contrary of any belief may be a presumption, but is certainly no proof, of its truth.

## CLVIII

It is remarkable that Hume does not refer to the sentimental arguments for the immortality of the soul which are so much in vogue at the present day ; and which are based upon our desire for a longer conscious existence than that which nature appears to have allotted to us. Perhaps he did not think them worth notice. For indeed it is not a little strange, that our strong desire that a certain occurrence should happen should be put forward as evidence that it

will happen. If my intense desire to see the friend, from whom I have parted, does not bring him from the other side of the world, or take me thither ; if the mother's agonised prayer that her child should live has not prevented him from dying ; experience certainly affords no presumption that the strong desire to be alive after death, which we call the aspiration after immortality, is any more likely to be gratified. As Hume truly says, "All doctrines are to be suspected which are favoured by our passions" ; and the doctrine, that we are immortal because we should extremely like to be so, contains the quintessence of suspiciousness.

## CLIX

If every man possessed everything he wanted, and no one had the power to interfere with such possession ; or if no man desired that which could damage his fellow-man, justice would have no part to play in the universe.

## CLX

To fail in justice, or in benevolence, is to be displeased with one's self. But happiness is impossible without inward self-approval ; and, hence, every man who has any regard to his own happiness and welfare, will find his best reward in the practice of every moral duty.

## CLXI

Virtue is undoubtedly beneficent ; but the man is to be envied to whom her works seem in anywise playful. And though she may not talk much about suffering and self-denial, her silence on that topic may be accounted for on the principle *faire dire.*

## CLXII

If mankind cannot be engaged in practices "full of austerity and rigour," in the love of righteousness and the fear of evil without seeking for other compensation

great meetings, is preceded by a ceremony. Mr. Howitt calls this "absurd custom" "group marriage," and, as the Dieri and Urabunna have, in his opinion, no All Father, holds (as I understand) that the All Father, among other tribes, is a belief accompanying social advance to "individual marriage."

But others think that *pirrauru* is merely "an absurd custom," as among the tinkers. Moreover, the Arunta, with individual marriage, have (in one region) no All Father, nor have other tribes with male reckoning of descent, while tribes with female descent *have* an All Father. The belief, therefore, is not a concomitant of progress in social organisation.

(4) Mr. Howitt says that "in this being" (the All Father), "although supernatural, there is no trace of the divine." He thinks the faith may have "perhaps commenced with the belief in the existence of the human self-consciousness as a spirit or ghost." There would be a tribe of such ghosts in the skyland; they would have a Headman; "from this it is not a long stretch to the idea of the All Father of the tribe."

Against this suggestion we must place the fact that the All Father is not envisaged as spiritual. Mr. Howitt, indeed, mentions an old man of the Yuin tribe, who said that the All Father, Tharamulun, died on earth, and that his spirit went to the sky, whence he can see people and is angry when they do what they ought not to do, especially when they eat forbidden food. Here we have the All Father spiritualised, but Mr. Howitt adds that "the usual statement is that he" (the All Father, or Tharamulun in this case) "went up in the flesh, as one of the *Gommeras*, or medicine-men, might do."<sup>1</sup> Mr. Howitt also remarks, elsewhere, on the usual mistake of speaking about the All Father as "great spirit, or good spirit." He says: "I must confess that I have also committed this misleading error

before I really perceived the true facts of the case."<sup>2</sup> The All Father is not envisaged as spiritual, and so cannot be the ghostly Headman of a tribe of ancestral ghosts, which I take, under correction, to be Mr. Howitt's theory of the origin of the All Father on his next page but four (pp. 503-7).

The All Father is not conceived of as a spirit, but as an anthropomorphic being, of unknown origin, sometimes self-created, and deathless. Hence it follows that he is not the ghost Headman of a tribe of ghosts. No ghost "is said to have made all things on the earth," like Narrundere<sup>3</sup> and Baiame.<sup>4</sup> "Bunjil was the maker of the earth, trees, and men."<sup>5</sup> No ghost of a man made earth, trees, and men! For these reasons, the facts being taken from Mr. Howitt's own collections, we cannot regard the All Father as an idealised ghost.

Mr. Howitt concludes thus (I quote as much of the passage as seems essential, and refer the reader to the page): "What I see is merely the action of elementary thought, reaching conclusions such as all savages are capable of, and which may have been at the root of monotheistic beliefs." He says that there is "no worship of the All Father," but that there are dances round the figure of clay representing Daramulun, and invocations of his name. Yet the natives "have not consciously any form of religion."<sup>6</sup>

My own view is expressed in an earlier statement by Mr. Howitt, a statement of 1884:

There is clearly a belief in a Great Spirit, or rather an anthropomorphic Supernatural Being, the "Master" of all, whose abode is above the sky, and to whom are attributed powers of omnipotence and omnipresence, or, at any rate,

<sup>1</sup> Howitt, *N. T. S. E. A.*, p. 503.

<sup>2</sup> Taplin, *The Narrinyeri*, p. 55. Howitt, *N. T. S. E. A.*, p. 488.

<sup>3</sup> Mr. Cyrus Doyle, quoted in Howitt, p. 494. Cf. also Ridley, *The Kamaroi*, p. 135.

<sup>4</sup> *Letters from Victorian Pioneers*, p. 84, in Howitt, p. 492.

<sup>5</sup> Howitt, *N. T. S. E. A.*, pp. 507, 508.

<sup>1</sup> Howitt, *N. T. S. E. A.*, p. 495.

than that which flows from the gratification of such love and the consciousness of escape from debasement, they are in a bad case. For they will assuredly find that virtue presents no very close likeness to the sportive leader of the joyous hours in Hume's rosy picture; but that she is an awful Goddess, whose ministers are the Furies, and whose highest reward is peace.

## CLXIII

Under its theological aspect, morality is obedience to the will of God; and the ground for such obedience is two-fold: either we ought to obey God because He will punish us if we disobey Him, which is an argument based on the utility of obedience; or our obedience ought to flow from our love towards God, which is an argument based on pure feeling and for which no reason can be given. For, if any man should say that he takes no pleasure in the contemplation of the ideal of perfect holiness, or, in other words, that he does not love God, the attempt to argue him into acquiring that pleasure would be as hopeless as the endeavour to persuade Peter Bell of the "witchery of the soft blue 'ey."

## CLXIV

In whichever way we look at the matter, morality is based on feeling, not on reason; though reason alone is competent to trace out the effects of our actions and thereby dictate conduct. Justice is founded on the love of one's neighbour; and goodness is a kind of beauty. The moral law, like the laws of physical nature, rests in the long run upon instinctive intuitions, and is neither more nor less "innate" and necessary than they are. Some people cannot by any means be got to understand the first book of Euclid; but the truths of mathematics are no less necessary and binding on the great mass of mankind. Some there are who cannot feel the difference between the "Sonata Appassionata" and "Cherry

Ripe"; or between a grave-stone-cutter's cherub and the Apollo Belvidere; but the canons of art are none the less acknowledged. While some there may be, who, devoid of sympathy, are incapable of a sense of duty; but neither does their existence affect the foundations of morality. Such pathological deviations from true manhood are merely the halt, the lame, and the blind of the world of consciousness; and the anatomist of the mind leaves them aside, as the anatomist of the body would ignore abnormal specimens.

And as there are Pascals and Mozarts, Newtons and Raffaelles, in whom the innate faculty for science or art seems to need but a touch to spring into full vigour, and through whom the human race obtains new possibilities of knowledge and new conceptions of beauty: so there have been men of moral genius, to whom we owe ideals of duty and visions of moral perfection, which ordinary mankind could never have attained: though, happily for them, they can feel the beauty of a vision, which lay beyond the reach of their dull imaginations, and count life well spent in shaping some faint image of it in the actual world.

## CLXV

The horror of "Materialism" which weighs upon the minds of so many excellent people appears to depend, in part, upon the purely accidental connection of some forms of materialistic philosophy with ethical and religious tenets by which they are repelled; and, partly, on the survival of a very ancient superstition concerning the nature of matter.

This superstition, for the tenacious vitality of which the idealistic philosophers who are, more or less, disciples of Plato and the theologians who have been influenced by them, are responsible, assumes that matter is something, not merely inert and perishable, but essentially base and evil-natured, if not actively antagonistic to, at least a negative dead-weight upon, the good.

the power, "to go anywhere and to do anything." The exhibition of his image to the novices, and the magic dances round it, approach very near to idol worship. The wizards who profess to communicate with him, and to be the mediums of communication between him and his tribe, are not far removed from an organised priesthood. To his direct ordinance are attributed the social and moral laws of the community. Although there is no worship of Daramulun, as, for instance, by prayer, yet there is clearly an invocation of him by name, and a belief that certain acts please while others displease him.

It has been said that the Australian savage is without any form of religion or religious beliefs. If religion is defined as being the formal worship of a divinity, then these savages have no religion; but I venture to assert that it can no longer be maintained that they have no belief which can be called religious—that is, in the sense of beliefs which govern tribal and individual morality under a supernatural sanction.<sup>1</sup>

In this earlier passage Mr. Howitt states my own view, which in 1884 was his, of South Eastern Australian religion. In his work of 1904, as in 1884, he speaks of the reverence with which the All Father was regarded. "The Wiimbaio speak of Nurelli with the greatest reverence. He is said to have made the whole country, with the rivers, trees, and animals."<sup>2</sup> In 1884 Mr. Howitt said:—

The name of Tharamulun is to them so sacred that even when speaking to me of it, when no one else was present but ourselves, the old men have done so in almost whispers, and have used elliptical expressions such as "he," "the man," or "the name I told you of." This I have found exactly paralleled by the reluctance of my Woi-worung informant to mention the name of Bunjil when speaking of his supernatural powers, although he did not show so much reluctance when repeating to me the "folklore" in which "the Great Spirit" of the Kulin plays his part.<sup>3</sup>

<sup>1</sup> *Journal Anthropological Institute*, 1884, pp. 458, 459.

<sup>2</sup> Howitt, *N. T. S. E. A.*, p. 489; 1904.

<sup>3</sup> *J. A. I.*, p. 193; 1884.

Though this passage does not occur (unless I have overlooked it) in Mr. Howitt's book of 1904, still it is an early record of facts observed by him. The reticence of the natives indicates fear (as when they fear to name a dead man, lest he hear and harm them), but it also indicates reverence, and, in the last case given, shows that a difference is taken between the "folklore" and the more religious beliefs about the being.

The belief in a being, commonly known as "our father," who is deathless, who existed before death, according to the myths, who came into the world, or who made it, who made things; who gave commandments, moral, ritual, and social; who keeps his eyes on human conduct; who, in some cases, rewards and punishes good men and evil in a future life; who "can go anywhere and do anything," whose figure is represented and whose name is invoked at the dances executed in his honour, does not now come within Mr. Howitt's definition of "religion," apparently. I do not know that he has formulated his definition, unless it be that prayer and cult, in addition to belief, constitute religion; but this Australian belief I cannot but regard as religious. If the belief is the result of "elementary thought, reaching conclusions such as all savages are capable of," *tant mieux pour Messieurs les sauvages!* Their competence to frame this belief is, however, constantly denied.

We see that these very backward savages are not what Mr. Huxley supposed them to be, and that "animism," or ghost-worship, is not the basis of their religion (if I may use the word), for, in fact, they do not worship ghosts.<sup>4</sup>

<sup>4</sup> The reader will find much about the All Father form of belief in the later editions of my *Myth, Ritual, and Religion* (see especially the Introduction to the second edition), and in my *Magic and Religion*. More recent evidence, with that used by myself, may be read in *La Notion de l'Être Suprême chez les Sauvages*, by M. René Hoffmann, (Rome, 26, Boulevard Georges - Favou, Geneva, 1907.) The New Series of the *Journal of the Anthropological*

## CLXVI

Judging by contemporary literature, there are numbers of highly cultivated and indeed superior persons to whom the material world is altogether contemptible ; who can see nothing in a handful of garden soil, or a rusty nail, but types of the passive and the corruptible.

To modern science, these assumptions are as much out of date as the equally venerable errors, that the sun goes round the earth every four-and-twenty hours, or that water is an elementary body. The handful of soil is a factory thronged with swarms of busy workers ; the rusty nail is an aggregation of millions of particles, moving with inconceivable velocity in a dance of infinite complexity yet perfect measure ; harmonic with like performances throughout the solar system. If there is good ground for any conclusion, there is such for the belief that the substance of these particles has existed and will exist, that the energy which stirs them has persisted and will persist, without assignable limit, either in the past or the future. Surely, as Heraclitus said of his kitchen with its pots and pans, "Here also are the gods." Little as we have, even yet, learned of the material universe, that little makes for the belief that it is a system of unbroken order and perfect symmetry, of which the form incessantly changes while the substance and the energy are imperishable.

## CLXVII

Of all the dangerous mental habits, that which schoolboys call "cocksureness" is probably the most perilous ; and the inestimable value of metaphysical discipline is that it furnishes an effectual counterpoise to this evil proclivity. Whoso has mastered the elements of philosophy knows that the attribute of unquestionable certainty appertains only to the existence of a state of consciousness so long as it exists ; all other beliefs are mere probabilities of a higher or lower order. Sound metaphysic is an amulet which renders its possessor proof

alike against the poison of superstition and the counterpoison of shadow negation ; by showing that the affirmations of the former and the denials of the latter alike deal with matters about which, for lack of evidence, nothing can be either affirmed or denied.

## CLXVIII

If the question is asked, What then do we know about matter and motion ? there is but one reply possible. All that we know about motion is that it is a name for certain changes in the relations of our visual, tactile, and muscular sensations ; and all that we know about matter is that it is the hypothetical substance of physical phenomena, the assumption of the existence of which is as pure a piece of metaphysical speculation as is that of the existence of the substance of mind.

Our sensations, our pleasures, our pains and the relations of these, make up the sum total of the elements of positive, unquestionable knowledge. We call a large section of these sensations and their relations matter and motion ; the rest we term mind and thinking ; and experience shows that there is a certain constant order of succession between some of the former and of the latter.

This is all that just metaphysical criticism leaves of the idols set up by the spurious metaphysics of vulgar common sense. It is consistent either with pure Materialism, or with pure Idealism, but it is neither. For the Idealist, not content with declaring the truth that our knowledge is limited to facts of consciousness, affirms the wholly unprovable proposition that nothing exists beyond these and the substance of mind. And, on the other hand, the Materialist, holding by the truth that, for anything that appears to the contrary, material phenomena are the causes of mental phenomena, asserts his unprovable dogma, that material phenomena and the substance of matter are the sole primary existences. Strike out the propositions about which neither controversialist does or can know anything, and

The All Father of the Australian South-Eastern and other tribes, and the Puluga of the Mincopies of the Andaman Islands, present us with a being certainly not unlike the Jahveh of early Israel, and certainly not evolved by the process of raising an ancestral ghost to a very high power. That opinion can no longer be logically maintained. Nor, in face of the facts, can we agree, generally speaking, with Sir Alfred Lyall's theory that "The foundation of natural religion.....is the principle of *Do ut des*" ("I give that you may give"), "and the most ingenious researches into the evolution of primitive ideas will hardly take us beyond or behind it."<sup>1</sup>

Researches have done the thing. To the chief being, in the belief of many tribes, nothing at all is given, except obedience to his commands, and such praise as may be inferred from the dances and invocations. To the supreme being of many polytheistic tribes—a being whom I take to be a survival of the All Father—nothing is given, as a general rule; he is addressed, by the Masai, in brief pious ejaculations,<sup>2</sup> as is Nzame among the Fans.<sup>3</sup> The Ehwe, or Ewe, supreme being, Mawu, is also appealed to in brief ejaculations, in moments of danger; but he receives no sacrifice. Once a year a she-goat is tethered up in his honour, and dies if it cannot nibble through the rope.<sup>4</sup>

Sacrifice to the supreme being of the polytheistic barbaric races is, in short, very rare. It is to the minor deities, probably evolved out of ghosts, and to ghosts themselves, that sacrifice is done; and among the most backward peoples, who possess an All Father, ghosts receive no sacrifice. They have not yet entered

*Institute* contains plenty of fresh evidence at first hand. The topic is received in more friendly fashion by German than by English anthropologists.

<sup>1</sup> *Asiatic Studies*, II., p. 172.

<sup>2</sup> Holler, *The Masai*, p. 346.

<sup>3</sup> Allégret, *Les Idées Religieuses des Fan*, p. 10; Leroux, Paris, 1904.

<sup>4</sup> Spieth, *Die Ewe-Slämme*; Reimer, Berlin, 1906.

on the religious plane, and among these races the giftless All Father rules—and receives nothing. He was not invented in accordance with the principle, "I give that you may give." He is asked for nothing, except, among the Euahlayi, for rain, and for compassion to the souls of the dead. This is the evidence of Mrs. Langloh Parker; but the case is isolated. The holding up towards heaven of a slain kangaroo, or other game, by the Narrinyeri, whose All Father is Nurundere, is the nearest approach among the Australians to sacrifice, or, perhaps, expression of gratitude.<sup>1</sup> Puluga, the creative being and moral judge of the Mincopies of the Andaman Islands, receives no sacrifice.<sup>2</sup>

Clearly, the theory of *Do ut des* as "the foundation of natural religion" is confuted by the facts, which were too long overlooked, though on record; they are constantly being corroborated by fresh observations and new instances. Efforts have been made to explain these giftless supreme or superior beings as the result of contact between the peoples who believe in them and European missionaries and explorers or settlers. An interesting essay in that direction is Mr. Tylor's "Limits of Savage Religion."<sup>3</sup>

On comparing Mr. Tylor's edition of *Primitive Culture* of 1871 with that of 1892, we see that most of the few changes which could be made in stereotyped plates are changes suggesting that savages have borrowed the higher attributes of their chief gods from Europeans. The essay of 1892 urges that point.

There are two insuperable *prima facie* objections. First, if savages recognised that the Christian God has great *mana*, they would pray to him, as the missionaries pray to their God, or would propitiate him as polytheists propitiate spirits and lower gods, by gifts. But they offer no gifts to their All Fathers, are known

<sup>1</sup> Taplin, *The Narrinyeri*, p. 55.

<sup>2</sup> Man, in *Journal of the Anthropological Institute*, vols. xi. and xii., 1882, 1883.

<sup>3</sup> *J. A. I.*, vol. xxi., 1892.

there is nothing left for them to quarrel about. Make a desert of the Unknowable, and the divine Astraea of philosophic peace will commence her blessed reign.

## CIXIX

*"Magna est veritas et prævalebit!"*  
Truth is great, certainly, but, considering her greatness, it is curious what a long time she is apt to take about prevailing.

## CIXX

To my observation, human nature has not sensibly changed through the last thirty years. I doubt not that there are truths as plainly obvious and as generally denied, as those contained in "Man's Place in Nature," now awaiting enunciation. If there is a young man of the present generation, who has taken as much trouble as I did to assure himself that they are truths, let him come out with them, without troubling his head about the barking of the dogs of St. Ermalphus, "Veritas prævalebit" some day; and, even if she does not prevail in his time, he himself will be all the better and the wiser for having tried to help her. And let him recollect that such great reward is full payment for all his labour and pains.

## CIXXI

Ancient traditions, when tested by the severe processes of modern investigations, commonly enough fade away into mere dreams: but it is singular how often the dream turns out to have been a half-waking one, presaging a reality. Ovid fore-shadowed the discoveries of the geologist: the Atlantis was an imagination, but Columbus found a western world: and though the quaint forms of Centaurs and Satyrs have an existence only in the realms of art, creatures approaching man more nearly than they in essential structure, and yet as thoroughly brutal as the goat's or horse's half of the mythical compound, are now not only known, but notorious.

## CIXXII

It is a truth of very wide, if not of universal, application, that every living creature commences its existence under a form different from, and simpler than, that which it eventually attains.

The oak is a more complex thing than the little rudimentary plant contained in the acorn; the caterpillar is more complex than the egg; the butterfly than the caterpillar; and each of these beings, in passing from its rudimentary to its perfect condition, runs through a series of changes, the sum of which is called its development. In the higher animals these changes are extremely complicated; but, within the last half century, the labours of such men as Von Baer, Rathke, Reichen, Bischoff, and Remak, have almost completely unravelled them, so that the successive stages of development which are exhibited by a dog, for example, are now as well known to the embryologist as are the steps of the metamorphosis of the silk-worm moth to the school-boy. It will be useful to consider with attention the nature and the order of the stages of canine development, as an example of the process in the higher animals generally.

## CIXXIII

Exactly in those respects in which the developing Man differs from the Dog, he resembles the ape, which, like man, has a spheroidal yolk-sac and a discoidal, sometimes partially lobed, placenta. So that it is only quite in the later stages of development that the young human being presents marked differences from the young ape, while the latter departs as much from the dog in its development, as the man does.

Startling as the last assertion may appear to be, it is demonstrably true, and it alone appears to me sufficient to place beyond all doubt the structural unity of man with the rest of the animal world, and more particularly and closely with the apes.

Thus, identical in the physical processes

to pray only in one ascertained case; and, among polytheists, though they use brief ejaculatory prayers among the Masai and Ewe races, they very seldom offer sacrifices to their highest being. Their attitude to him is, therefore, not the result of Christian influences. They have not even learned to take their gods' names in vain.

Secondly, among the Australians, the knowledge of the All Father, even of his name, is concealed from women, children, and, usually, from white men, except the few who have been initiated. Till he was informed by an initiate, Mr. Howitt knew nothing about the Kurnai belief in Mungan-ngaaua; and he is persuaded that such beliefs are original, not borrowed from the whites. Forty years ago the eminent anthropologist Waitz was of the same opinion.

It is inconceivable that, if savages borrowed their highest religious conceptions from European teachers, their women and children should have been left in the dark by these evangelists. I have seen no reply to these two arguments against the theory that the better part of savage religious ideas have been derived, as a rule, from missionary teaching, though there exist distinct traces of "contamination" of native opinion here and there. But my view is distasteful to most anthropologists.

Thus Monsieur Mauss, reviewing Mr. Howitt's account of what he learned from the Kurnai, thinks that their All Father Mungan-ngaaua (of whom Mr. Howitt knew nothing till he was informed by an initiate) was originally nothing but a personification of the bull-roarer, and that originally the initiate were told that Mungan-ngaaua was "an imaginary, mythical figure," before the missionaries came. After the missionaries came (and when they came M. Mauss does not tell us), Mungan-ngaaua was converted into the paternal and ethical being revealed to Mr. Howitt.<sup>1</sup> This theory of M. Mauss,

rejected by Mr. Howitt, as we have seen, ought to have been accompanied by an account of missionary work among the Kurnai prior to Mr. Howitt's information.

M. Mauss does not remark that Mr. Howitt received the facts from a man initiated before 1844, when the whites came into the Kurnai country; and long before 1860, when, as far as Mr. Howitt remembers, the missions were established. "In all subjects, religious or not religious," says Vinet, "the talent for seeing only what we want to see is one of the most terrible that the devil has imparted to mankind."<sup>2</sup> M. Mauss has also to explain why the Kurnai do not pray to Mungan-ngaaua, and how it happens that their women and children do not know about the attributes of that being.

Sir A. B. Ellis, after advocating warmly the theory of borrowing, has abandoned it; and Miss Kingsley, with her intimate knowledge of African religion, rejects the theory of borrowing in general, with some exceptions. "The African superior being" is not a memory of Jehovah."<sup>3</sup>

I have criticised Mr. Tylor's essay on borrowing ("Limits of Savage Religion") in minute detail.<sup>4</sup> It is not possible here to go into the historical evidence.<sup>4</sup> As I wrote in *Magic and Religion*, "I am nervous about differing from Mr. Tylor," and I printed a second study of his essay; but my conclusions are fortified by the opinions of Mr. Howitt, Sir A. B. Ellis, and Miss Kingsley, and by the fresh examination of old evidence by Mr. Thomas.

So far I have reached this point: as far as my reading and powers of reasoning have instructed me, many very back-

<sup>1</sup> *Etudes sur Pascal*, p. 94, 1904; in Hoffmann, *La Notion de l'Être Suprême chez les Sauvages*, p. 34.

<sup>2</sup> *Folk Lore*, vol. viii., 1897.

<sup>3</sup> *Magic and Religion*, pp. 15-45, 295-97.

<sup>4</sup> For the case of the Australian Bajaine, as pre-missionary, see Mr. N. W. Thomas, in *Man*, 1905, No. 28.

by which he originates—identical in the early stages of his formation—identical in the mode of his nutrition before and after birth, with the animals which lie immediately below him in the scale. Man, if his adult and perfect structure be compared with theirs, exhibits, as might be expected, a marvellous likeness of organisation. He resembles them as they resemble one another—he differs from them as they differ from one another.

## CLXXIV

If a man cannot see a church, it is preposterous to take his opinion about its altar-piece or painted window.

## CLXXV

Perhaps no order of mammals presents us with so extraordinary a series of gradations as this<sup>1</sup>—leading us insensibly from the crown and summit of the animal creation down to creatures, from which there is but a step, as it seems, to the lowest, smallest, and least intelligent of the placental Mammalia. It is as if nature herself had foreseen the arrogance of man, and with Roman severity had provided that his intellect, by its very triumphs, should call into prominence the slaves, admonishing the conqueror that he is but dust.

## CLXXVI

If Man be separated by no greater structural barrier from the brutes than they are from one another—then it seems to follow that if any process of physical causation can be discovered by which the general and families of ordinary animals have been produced, that process of causation is amply sufficient to account for the origin of Man.

## CLXXVII

The whole analogy of natural operations furnishes so complete and crushing an

<sup>1</sup> This alludes to a foregoing enumeration of the seven families of PRIMATES headed by the ANTHROPOINI containing man alone.

argument against the intervention of any but what are termed secondary causes, in the production of all the phenomena of the universe; that, in view of the intimate relations between Man and the rest of the living world, and between the forces exerted by the latter and all other forces, I can see no excuse for doubting that all are co-ordinated terms of Nature's great progression, from the formless to the formed—from the inorganic to the organic—from blind force to conscious intellect and will.

## CLXXVIII

Science has fulfilled her function when she has ascertained and enunciated truth.

## CLXXIX

Thoughtful men, once escaped from the blinding influences of traditional prejudice, will find in the lowly stock whence Man has sprung the best evidence of the splendour of his capacities; and will discern in his long progress through the Past a reasonable ground of faith in his attainment of a nobler Future. . .

And after passion and prejudice have died away, the same result will attend the teachings of the naturalist respecting that great Alps and Andes of the living world—Man. Our reverence for the nobility of manhood will not be lessened by the knowledge that Man is, in substance and in structure, one with the brutes; for he alone possesses the marvellous endowment of intelligible and rational speech, whereby, in the secular period of his existence, he has slowly accumulated and organised the experience which is almost wholly lost with the cessation of every individual life in other animals; so that, now, he stands raised upon it as on a mountain top, far above the level of his humble fellows, and transfigured from his grosser nature by reflecting, here and there, a ray from the infinite source of truth.

ward tribes believe in an All Father, not animistic, not a ghost; not prayed to, not in receipt of sacrifice, but existent from the beginning, exempt from death, and (in his highest aspects) kindly, an ethical judge of men, and either a maker of men and most things, or a father of men and a maker of many things. He also, in some cases, is Lord of the Dead, and awards retribution.<sup>1</sup>

I cannot but see in this faith of the most backward of known peoples "ideas which may have been at the root of monotheistic beliefs," to use the words of Mr. Howitt. These ideas, gradually purified, as Mr. Huxley points out, by the prophets, account, in the most obvious way, for the prophetic conception of Jahveh. A peculiarity of the religion of Israel was the concentration of sacrifices on Jahveh, and their absence (as far as our evidence goes) in Hebrew spirit-worship, which seems hardly to have left a certain trace. Mr. Huxley writes that "the essence of the change," "the great reformation" produced by the prophets, "is the reversal of the position which, in primitive society, ethics holds in relation to theology. Originally, that which men worship is a theological hypothesis, not a moral ideal. The prophets, in substance, if not always in form, preach the opposite doctrine."<sup>2</sup>

But we have shown that among certain Australian tribes, say the Euahlayi, Kurnai, and Wathi-Wathi, the All Father is the ethical ideal. The best moral ideas of the natives, including truthfulness and unselfishness, are in-

culcated at the rites as precepts of Baiame or Mungan-ngaau, in company with other rules about the conduct of life, ritual, forbidden foods, and forbidden degrees in marriage.

Thus the teaching of the prophets was not so much "a reversal of" as a return to "the position which, in primitive society" (or in some "primitive" societies) "ethics holds in relation to theology." In the present state of Biblical criticism it is impossible to quote texts proving that Jahveh is always, as far as our evidence goes, an ethical being, because we may be told that the texts are late interpolations; and the proof that they are late is the fact that they are moral. "There is none holy as the Lord.....The Lord shall judge the ends of the earth," says the Song of Hannah (1 Samuel ii. 2-10). I suppose this may be called a post-Exilian interpolation; or, again, we are told by Mr. Huxley that perhaps Moses became acquainted with "the advanced ethical and legal code of Egypt, and with the more or less pantheistic unification of the Divine to which the speculations of the Egyptian thinkers, like those of all polytheistic philosophers, from Polynesia to Greece, tend; if, indeed, the theology of the period of the nineteenth dynasty was not, as some Egyptologists think, a modification of an earlier, more distinctly monotheistic doctrine of a long antecedent age."<sup>3</sup>

Other critics maintain that Israel was never in Egypt at all. If so, Moses did not pick the brains of the Egyptians. Nor did the dusky theologians of Australia and the Andaman Islands; while, if any man "lives up to" their best moral ideas, he will be an excellent citizen, or not a bad socialist, as you please to put it. On the other hand, if a man adopts many of the lower Australian practices; initiates his children by painful and dangerous rites; marries in the Arunta fashion; avenges the natural

<sup>1</sup> See *The Euahlayi Tribe*, and Mr. Cameron's account of Tha-Tha Puli, the All Father of the Wathi-Wathi. *J. A. I.*, pp. 344, 370; 1885. Mr. Cameron knew the blacks forty years ago. He closely cross-examined his informant, Makogo, and could not shake his evidence that the beliefs were held "before the settlement of the country by white men." "We would be better off," said Makogo, "if our beliefs had never been disturbed"; such is Mr. Cameron's version of his statement. There are plenty of other examples.

<sup>2</sup> *Science and Hebrew Tradition*, p. 361.

<sup>3</sup> *Science and Hebrew Tradition*, pp. 359, 360.

## CLXX

Ethnology, as thus defined, is a branch of Anthropology, the great science which unravels the complexities of human structure; traces out the relations of man to other animals; studies all that is especially human in the mode in which man's complex functions are performed; and searches after the conditions which have determined his presence in the world. And Anthropology is a section of Zoology, which again is the animal half of Biology—the science of life and living things.

Such is the position of ethnology, such are the objects of the ethnologist. The paths or methods, by following which he may hope to reach his goal, are diverse. He may work at man from the point of view of the pure zoologist, and investigate the anatomical and physiological peculiarities of Negroes, Australians, or Mongolians, just as he would inquire into those of pointers, terriers, and turnspits,—"persistent modifications" of man's almost universal companion. Or he may seek aid from researches into the most human manifestation of humanity—Language; and assuming that what is true of speech is true of the speaker—a hypothesis as questionable in science as it is in ordinary life—he may apply to mankind themselves the conclusions drawn from a searching analysis of their words and grammatical forms.

Or, the ethnologist may turn to the study of the practical life of men; and relying upon the inherent conservatism and small inventiveness of untutored mankind, he may hope to discover in manners and customs, or in weapons, dwellings, and other handiwork, a clue to the origin of the resemblances and differences of nations. Or, he may resort to that kind of evidence which is yielded by History proper and consists of the beliefs of men concerning past events, embodied in traditional, or in written, testimony. Or, when that thread breaks, Archaeology, which is the interpretation of the unrecorded remains of man's works, belonging

to the epoch since the world has reached its present condition, may still guide him. And, when even the dim light of archaeology fades, there yet remains Palaeontology, which, in these latter years, has brought to daylight once more the *exuvia* of ancient populations, whose world was not our world, who have been buried in river beds immemorially dry, or carried by the rush of waters into caves, inaccessible to inundation since the dawn of tradition.

## CLXXXI

The rapid increase of natural knowledge, which is the chief characteristic of our age, is effected in various ways. The main army of science moves to the conquest of new worlds slowly and surely, nor ever cedes an inch of the territory gained. But the advance is covered and facilitated by the ceaseless activity of clouds of light troops provided with a weapon always efficient, if not always an arm of precision—the scientific imagination. It is the business of these *enfants perdus* of science to make raids into the realm of ignorance wherever they see, or think they see, a chance; and cheerfully to accept defeat, or it may be annihilation, as the reward of error. Unfortunately the public, which watches the progress of the campaign, too often mistakes a dashing incursion of the Uhlians for a forward movement of the main body; fondly imagining that the strategic movement to the rear, which occasionally follows, indicates a battle lost by science. And it must be confessed that the error is too often justified by the effects of the irrepressible tendency which men of science share with all other sorts of men known to me, to be impatient of that most wholesome state of mind suspended judgment; to assume the objective truth of speculations which, from the nature of the evidence in their favour, can have no claim to be more than working hypotheses.

The history of the "Aryan question" affords a striking illustration of these general remarks.

deaths of his kinsfolk on perfectly innocent people, and so on, the police will interfere, and among other inconveniences he will find himself in the divorce court.

We have been tracing the All Father at his best with pronounced moral attributes. But in Australia there are tribes, notably the Arunta studied by Messrs. Spencer and Gillen, who have no moral All Father—no All Father—and there are other tribes, such as the Arunta studied by Mr. Strehlow, and the Kaitish, who have an All Father concerned about the obedience of men to his ritual rules, but unconcerned, as far as our evidence goes, with human "ethics."

Thus the question arises, Is the earliest form of belief that in which there is no All Father, is the non-moral All Father the next stage, and are the ethical All Fathers the last link in the chain among the Australian tribes? Or is the ethical All Father the earliest, the non-ethical a decadence, and has the All Father become obsolete among the Arunta of Messrs. Spencer and Gillen? The view favoured by anthropologists generally is that religious conceptions advance with improvement in food and comfort, caused by rain, which is most copious in coastal regions. But we have seen that the theory does not work; if it did, such northern and north-eastern tribes as the Anula and Mara, and islanders in the Torres Straits, should have a highly developed All Father, whereas no All Father is reported among them; and the neighbours of the Arunta, with certain Arunta groups as remote as the other Arunta from the sea, should have no All Father, whereas they have Atnatu, Altjira, and Tukura.

While I cannot presume to dogmatise on the question of priority of development, it is necessary to remark that the Arunta, with their neighbours, the Urapunna, to the west, and many tribes between the centre and the north, possess a form of philosophy, and a mythical belief (it can hardly be called

a religious belief), which cannot easily co-exist with faith in an All Father.

As the philosophy and the myths are certainly the results of careful speculation, it is not at all impossible that, while they were being matured in human minds, the simpler belief in the All Father was destroyed (if it existed), and among some tribes was wholly forgotten, while in others it was partially obliterated.

That philosophic and scientific speculation may obliterate religious belief among civilised men is not questioned; and speculations, really scientific in tendency, may have similar effects among savages. The Dieri and Urapunna tribes, with those of the centre and north-east, whether they have an All Father (like Strehlow's Arunta, the Loritja, the Kaitish), or have none, possess a very elaborate animistic philosophy, a doctrine of spirits. Wherever the souls of the dead are much worshipped, there the idea of an All Father, or of a God, tends to be "crowded out" by the competition of accessible, friendly, human spirits or saints, not too high, not too remote. Among the All Fatherless Australians, and among those whose All Father is not ethical, the philosophy of spirits (nowhere absent) is raised to the highest power. There are differences in the systems of each tribe, but they have all features in common with the philosophy of the Arunta. According to them, in the *Alcheringa* (and they do not, like the Kaitish, look behind the *Alcheringa* and see Atnatu "making it"), a number of animate shapeless bulks lay about in a marine environment. These *Inapertwa*, though animate and gifted with specific potentialities and with indwelling spirits, took on no obvious differentiation of species till they were slit with flint knives by the two beings named *Ungambikula* ("self-existing," or "made out of nothing.") The Arunta language is capable of conveying abstract conceptions! The bulks then took animal forms, these of the various totems of the tribe, some two hundred in number.

## CLXXXII

Language is rooted half in the bodily and half in the mental nature of man. The vocal sounds which form the raw materials of language could not be produced without a peculiar conformation of the organs of speech ; the enunciation of duly accented syllables would be impossible without the nicest co-ordination of the action of the muscles which move these organs ; and such co-ordination depends on the mechanism of certain portions of the nervous system. It is therefore conceivable that the structure of this highly complex speaking apparatus should determine a man's linguistic potentiality ; that is to say, should enable him to use a language of one class and not of another. It is further conceivable that a particular linguistic potentiality should be inherited and become as good a race mark as any other. As a matter of fact, it is not proven that the linguistic potentialities of all men are the same.

## CLXXXIII

Community of language is no proof of unity of race, is not even presumptive evidence of racial identity. All that it does prove is that, at some time or other, free and prolonged intercourse has taken place between the speakers of the same language.

## CLXXXIV

The capacity of the population of Europe for independent progress while in the copper and early bronze stage—the “paleo-metallic” stage, as it might be called—appears to me to be demonstrated in a remarkable manner by the remains of their architecture. From the crannog to the elaborate pile-dwelling, and from the rudest enclosure to the complex fortification of the terramare, there is an advance which is obviously a native product. So with the sepulchral constructions ; the stone cist, with or without a preservative or memorial cairn, grows into the chambered

graves lodged in tumuli; into such megalithic edifices as the dromic vaults of Maes How and New Grange ; to culminate in the finished masonry of the tombs of Mycenae, constructed on exactly the same plan. Can anyone look at the varied series of forms which lie between the primitive five or six flat stones fitted together into a mere box, and such a building as Maes How, and yet imagine that the latter is the result of foreign tuition ? But the men who built Maes How, without metal tools, could certainly have built the so-called “treasure-house” of Mycenae with them.

## CLXXXV

Reckoned by centuries, the remoteness of the quaternary, or pleistocene, age from our own is immense, and it is difficult to form an adequate notion of its duration. Undoubtedly there is an abyssal difference between the Neanderthaloid race and the comely living specimens of the blond long-heads with whom we are familiar. But the abyss of time between the period of which North Europe was first covered with ice, when savages pursued mammoths, and scratched their portraits with sharp stones in central France, and the present day, ever widens as we learn more about the events which bridge it. And, if the differences between the Neanderthaloid men and ourselves could be divided into as many parts as that time contains centuries, the progress from part to part would probably be almost imperceptible.

## CLXXXVI

I have not been one of those fortunate persons who are able to regard a popular lecture as a mere *hors d'œuvre*, unworthy of being ranked among the serious effort of a philosopher ; and who keep their fame as scientific hierophants unsullied by attempts at least of the successful sort to be understood of the people.

On the contrary, I found that the task of putting the truths learned in the field,

Each was a kangaroo man, or a man kangaroo, a man iguana, or an iguana-man, and so with all the rest. Though merely animals in one aspect, in another these beings were human. Thus the Arunta explain to themselves why they are animals, by totem name, and why each man is in mystic *rappor*t with his own totem, an animal or other object. For each Arunta man, woman, and child is *not descended from* one of the primeval forms, but *is* that form, and *incarnates the spirit* which first tenanted that form. *The Arunta have no ancestors.* In their opinion, their spirit and life have been from the Alcheringa, the beginning, have existed ever since spirits tenanted the undifferentiated bulks on the salt sands.

Sexual connection cannot make such an everlasting spirit, and so the Arunta deny that babies are the result of sexual connection. The first beast-men, or men-beasts, had very potent magical power, and went about performing rites, and achieving monstrously tedious impossible adventures. They could pass along under ground, but the time came when each group went into the earth and died, as far as the body was concerned. Hills, trees, springs, and rocks arose to mark the spots, *Oknanikilla*, and the spirits of the group, each group being of one totem, haunt the spot. They especially haunt the stone amulets, adorned with concentric circles, spirals, cups, and volutes, which they used to carry (*Churinga Nanja*). When a spirit is tired of hanging about thus, he incarnates himself in any passing married woman. When the spirit is born again in the flesh he is not, save by accident, of his father's or mother's totem, but of the totem to which the ghosts belong who haunt the spot (*Oknanikilla*) at which his mother first became aware of his life within her.<sup>1</sup>

<sup>1</sup> The brief summary of Arunta philosophy here given is derived from the two works by Messrs. Spencer and Gillen, on the *Central and North Central Tribes of Australia*. These authorities declare that, according to the Arunta

Such is the Arunta philosophy. The original groups had no chiefs, though one Alcheringa man might be more distinguished than another. At present each totemic group has an *Alatunja*—a kind of head man, or "Moderator"; the office is hereditary in the male line. But the philosophy does not need, and does not recognise, any All Father, any maker of things. All came by evolution, with a little supernormal assistance from the beings that were "self-existing" (*Ungambikula*). There can be neither All Father nor future life in another world, by the very nature of this philosophy. The Kaitish say that half of their tribe were developed by evolution; the other half are children of Atnatu.

legends, each group of Alcheringa folk, after many adventures, "went into the earth," died the death of the body, and left their spirits hovering about the spot and about their stone amulets. Rocks, trees, or other features in the landscape arose to mark these mortuary centres called *Oknanikilla*. In such a spot, when a child supposed to have been conceived there is born, his primeval stone amulet is sought for, and is said to be found. If it is not found, a wooden amulet, or *churinga*, is made for the child. I have ventured to suggest that these *Oknanikilla* may actually be old burying-places, and that the stone amulets found in them may have been laid on the ancient graves, like the marked banana-shaped stones found on the graves of the natives near the Darling River and elsewhere in South-Eastern Australia. Nothing can be ascertained except by carefully conducted excavations. In any case, according to our authorities, the Arunta whom they studied believed in the perpetual reincarnation of an original, primary stock of spirits, though the owners of these spirits *died*, as all subsequent owners do. Monsieur H. Van Gennep, however, a French critic who never saw an Arunta, maintains that, in Arunta opinion, the Alcheringa people went under the ground, *but did not die*. I think that Messrs. Spencer and Gillen ought to know best the nature of the opinions of the Arunta. Mr. Strehlow, a missionary among another set of Arunta, maintains, according to M. Van Gennep, that, in the theory of the flock, the mythic ancestors went into the earth, did not die there (Van Gennep, *Aranda Children* by 1908, No. 18). The reader may consult *Die Aranda und Luritja Stämme*, (Frankfort, 1907), and form his own opinion. The views of M. Van Gennep, as briefly stated in *Man*, are not intelligible by me.

the laboratory and the museum, into language which, without bating a jot of scientific accuracy, shall be generally intelligible, taxed such scientific and literary faculty as I possessed to the uttermost; indeed my experience has furnished me with no better corrective of the tendency to scholastic pedantry which besets all those who are absorbed in pursuits remote from the common ways of men, and become habituated to think and speak in the technical dialect of their own little world, as if there were no other.

If the popular lecture thus, as I believe, finds one moiety of its justification in the self-discipline of the lecturer, it surely finds the other half in its effect on the auditory. For though various sadly comical experiences of the results of my own efforts have led me to entertain a very moderate estimate of the purely intellectual value of lectures; though I venture to doubt if more than one in ten of an average audience carries away an accurate notion of what the speaker has been driving at; yet is that not equally true of the oratory of the hustings, of the House of Commons, and even of the pulpit?

Yet the children of this world are wise in their generation; and both the politician and the priest are justified by results. The living voice has an influence over human action altogether independent of the intellectual worth of that which it utters. Many years ago, I was a guest at a great City dinner. A famous orator, endowed with a voice of rare flexibility and power; a born actor, ranging with ease through every part, from refined comedy to tragic unction, was called upon to reply to a toast. The orator was a very busy man, a charming conversationalist, and by no means despised a good dinner; and, I imagine, rose without having given a thought to what he was going to say. The rhythmic roll of sound was admirable, the gestures perfect, the earnestness impressive; nothing was lacking save sense and, occasionally, grammar. When the speaker sat down the applause was terrific, and one of my neighbours was especially enthusiastic.

So when he had quieted down, I asked him what the orator had said. And he could not tell me.

That sagacious person John Wesley is reported to have replied to some one who questioned the propriety of his adaptation of sacred words to extremely secular airs, that he did not see why the Devil should be left in possession of all the best tunes. And I do not see why science should not turn to account the peculiarities of human nature thus exploited by other agencies: all the more because science, by the nature of its being, cannot desire to stir the passions, or profit by the weaknesses, of human nature. The most zealous of popular lecturers can aim at nothing more than the awakening of a sympathy for ab's'n' truth, in those who do not really know his arguments; and of a desire to know more and better in the few who do.

At the same time it must be admitted that the popularisation of science, whether by lecture or essay, has its drawbacks. Success in this department has its perils for those who succeed. The "people who fail" take their revenge, as we have recently had occasion to observe, by ignoring all the rest of a man's work and glibly labelling him a mere populariser. If the falsehood were not too glaring, they would say the same of Faraday and Helmholtz and Kelvin.

## CIXXVII

Of the affliction caused by persons who think that what they have picked up from popular exposition qualifies them for discussing the great problems of science, it may be said, as the Radical toast said of the power of the Crown in bygone days, that it "has increased, is increasing, and ought to be diminished." The oddities of "English as she is spoke" might be abundantly paralleled by those of "Science as she is misunderstood" in the sermon, the novel, and the leading article; and a collection of the grotesque travesties of scientific conceptions, in the shape of essays on such trifles as "the Nature of

The question arises, Did the Arunta evolve this relatively scientific theory of the origin of things from the first? Had they never the doctrine of the All Father? Or did they, like the members of the tribe whom Mr. Strehlow has studied, and whom Mr. Gillen has also described,<sup>1</sup> once possess the idea of the All Father above the sky, once possess an All Father?

This question cannot, at present, be answered with certainty. The Arunta, like the tribes with an All Father, use the wooden bull-roarer (*churinga irula*) to make its ghostly roar, and frighten away the women, when they initiate the boys arrived at puberty. Among tribes with an All Father a subordinate being, a deputy or son of Baiame, or Daramulun, or Mungan-ngauna, presides over the bull-roarer, and the women are told that he plays a part in the ceremonies. Among the Arunta there is a being corresponding to these deputies of the All Father. His name is Twanyirika. But, while his existence is asserted to the women and children, the initiated are told that he is purely mythical, which they are not to divulge.<sup>2</sup>

Are we to suppose that the Arunta, possessing, as a confessedly mythical bogey, a figure who corresponds to the usual deputy of the All Father, had once an All Father, who vanished when their evolutionary and animistic philosophy was developed? In deciding this point (unless we receive further information) I suppose that everyone will be influenced by his natural bias. Obviously, the question can be argued either way.

Thus, did the Kaitish originally believe only in the evolution of their species, and did they later invent Atnatu, who is the father of a large proportion

of their tribe? Or did they begin with father Atnatu, and later adopt evolution, only in part, from the Arunta philosophers? I point out that the Kaitish have certainly borrowed their form of totemism from that of the Arunta, who are unique in being able to marry women of their own totems. This they do freely; but the Kaitish, though they have the Arunta form of totemism, do not marry women of their own totems, or only do so by the rarest exception. The ancient universal prohibition, removed by law, abides in custom.

About the Dieri tribe, among whom the Mura Mura answer to the Arunta Aleheringa men, our information is vague. Mr. Howitt gives Bunjil and Daramulun as All Fathers, and denies that the Dieri have (as far as is known) any All Father. Yet he writes about a medicine-man announcing "a command received from some supernatural being, such as Kutchi of the Dieri, Bunjil of the Nurunjerry, or Daramulun of the Coast Murring."<sup>3</sup>

If Daramulun and Bunjil be All Fathers, as is granted, and if Kutchi be on the same plane, then the Dieri have an All Father. But there is no trace of regard paid to him in the rites. A vague being, as far as we know, there is this interesting fact about him—that "Kutchi" is a term applied to anything strange and mysterious, like Elohim, *wakan*, and *orenda*, apparently. At least it means a ghost, and "is used by the Dieri for any of the strange paraphernalia (*sic*) of the whites, for even a dray and team of bullocks has been so called."<sup>4</sup> Kutchi is thus at once a being who, like Bunjil and Daramulun, inspires the medicine-men, and also a term for anything that is strange and "has *mana*." Like our own fairies, Kutchi makes dust whirlwinds, which cause "great consternation" in Dieri camps, and portend "great calamity."<sup>5</sup>

There has been much doubt concern-

ment, . . . this Alkira is mentioned in either Arunta, with one in collaboration by Messrs. bunna, to illen. Mr. Gillen's earlier statement, . . . not said to have been correct, or to have been erroneous.

<sup>1</sup> *Central Native Tribes*, p. 246, note. *Northern Tribes*, p. 497.

<sup>2</sup> Howitt, *Native Tribes of South-East Australia*, p. 89.

<sup>3</sup> *Ibid.* p. 446.

<sup>4</sup> *Ibid.*

Life" and the "Origin of All Things," which reach me, from time to time, might well be bound up with them.

## CLXXXVIII

The essay on Geological Reform unfortunately brought me, I will not say into collision, but into a position of critical remonstrance with regard to some charges of physical heterodoxy, brought by my distinguished friend Lord Kelvin, against British Geology. As President of the Geological Society of London at that time (1869), I thought I might venture to plead that we were not such heretics as we seemed to be; and that, even if we were, recantation would not affect the question of evolution.

I am glad to see that Lord Kelvin has just reprinted his reply to my plea, and I refer the reader to it. I shall not presume to question anything that, on such ripe consideration, Lord Kelvin has to say upon the physical problems involved. But I may remark that no one can have asserted more strongly than I have done, the necessity of looking to physics and mathematics, for help in regard to the earliest history of the globe.

And I take the opportunity of repeating the opinion that, whether what we call geological time has the lower limit assigned to it by Lord Kelvin, or the higher assumed by other philosophers; whether the germs of all living things have originated in the globe itself, or whether they have been imported on, or in, meteorites from without, the problem of the origin of those successive Faunaæ and Floraæ of the earth, the existence of which is fully demonstrated by palæontology, remains exactly where it was.

For I think it will be admitted, that the germs brought to us by meteorites, if any, were not ova of elephants, nor of crocodiles; not cocoa-nuts nor acorns; not even eggs of shell-fish and corals; but only those of the lowest forms of animal and vegetable life. Therefore, since it is proved that, from a very remote epoch of

geological time, the earth has been peopled by a continual succession of the higher forms of animals and plants, these either must have been created, or they have arisen by evolution. And in respect of certain groups of animals, the well-established facts of palæontology leave no rational doubt that they arose by the latter method.

In the second place, there are no data whatever, which justify the biologist in assigning any, even approximately definite, period of time, either long or short, to the evolution of one species from another by the process of variation and selection. In the essay on Geological Contemporaneity and Persistent Types of Life I have taken pains to prove that the change of animals has gone on at very different rates in different groups of living beings; that some types have persisted with little change from the palæozoic epoch till now, while others have changed rapidly within the limits of an epoch. In 1862 (see Coll. E. S. viii. pp. 303, 304), in 1863 (vol. ii., p. 171), and again in 1864 (*ibid.*, pp. 89-91), I argued, not as a matter of speculation, but from paleontological facts, the bearing of which I believe, up to that time, had not been shown, that any adequate hypothesis of the causes of evolution must be consistent with progression, stationariness, and retrogression, of the same types at different epochs; of different types in the same epoch; and that Darwin's hypothesis fulfilled these conditions.

According to that hypothesis, two factors are at work, variation and selection. Next to nothing is known of the cause of the former process; nothing whatever of the time required for the production of a certain amount of deviation from the existing type. And, as respects selection, which operates by extinguishing all but a small minority of variations, we have not the slightest means of estimating the rapidity with which it does its work. All that we are justified in saying is that the rate at which it takes place may vary almost indefinitely. If the famous paint-root of Florida, which kills white pigs but not

ing the Dieri *Mura Mura*, reported by Mr. Gason (who knew the Dieri language) to be of the All Father type.<sup>1</sup> But Mr. Siebert, who was for long a missionary among the Dieri, finds the *Mura Mura* to be mere Alcheringa spirits that live apart, in the sky, and send rain, when influenced by the ceremonies of the Dieri "calling upon the rain-making *Mura-Mura*, calling out in loud voices the impoverished state of the country." They are supposed to inspire the men, *Kunkis*, whose veins are lanced in the ceremony. "The *Mura-Mura* is supposed to see this." The verb singular doubtless represents Mr. Gason's view of the case, not Mr. Howitt's.<sup>2</sup> Here we have a combination of invocation, or prayer, with symbolic ceremony. One *Mura-Mura* "perfected mankind," "went about making men everywhere."<sup>3</sup>

The Dieri have also a sky-dwelling being—Arawotya. "He at one time wandered over the earth," making deep water-springs. "After this he went up into the sky," like the All-Fathers.<sup>4</sup>

Meanwhile Mr. Strehlow, who worked among the Dieri and collaborated in a religious book for their students, avers that "it is a fact acquired for science that the Dieri know a deity of the heavens—*Mura*" (or, better, *Murra*, as Mr. Reuther, a missionary among them during fourteen years, attests). On this showing, *Mura* is the All Father; *Mura-Mura* are the pre-existing mythical race, as among the Loritja, neighbours of the Arunta, Tukura is the All Father; while the plural form of Tukura—Tukutita—answers to the mythical *Mura-Mura* of the Dieri.<sup>5</sup>

Mr. Siebert, who found no All Father, knew the Dieri language, no doubt, as certainly Mr. Gason (a police officer), Mr. Strehlow, and Mr. Reuther knew, or know, it. Yet they differ absolutely; and as the Dieri are now under mission-

aries, and are nearly extinct, we are unlikely to be better informed. As far as I can see, the Dieri had inklings of an All Father, germinal or decadent, and had religion enough to pray to the *Mura-Mura*, or *Murra*, as the case may be. This is almost unique in Australia. Among the tribes northward from the Arunta, and east-by-north to the Anula and Mara, on the coast, Messrs. Spencer and Gillen report no All Father, even in germ or in decadence. But travel through sixteen tribes, each with different language or dialect, cannot know everything about tribal beliefs.

On considering the whole evidence, it seems to me that while a doctrine of spirits and the practice of magic prevail everywhere, while nowhere are spirits worshipped (for the Dieri *Mura-Mura* are an oligarchy of legendary prehistoric beings), spirit-worship is not the origin of such religion as the Australians possess. Their speculations appear, in some tribes, to have taken the line of evolution and of animism, which stifled the belief in the All Father, if once men had it, or prevented it from arising, if they never had it. These tribes appear to me to be destitute of religion; for, though the disincarnate spirits of the Arunta may be present, invisibly, and pleased by their co-operative totemistic magic ceremonies, these are performed, not to please the spiritual spectators, but for practical purposes—the increase of the food supply. Among the tribes with an All Father, in favourable circumstances, prayer and worship might develop into a kind of monotheistic religion.

The tribes who, like the Dieri, have *Mura-Mura*, might develop them into a polytheism, like that of Greece, of the Northmen, or of the Maoris, though other elements, such as adoration of Sun, Earth, and Sky, go to make up polytheism. The early adventures, the *jeunesse orageuse*, of the Greek and Scandinavian and Vedic gods are much like those of the *Mura-Mura*.

The Kurnai not only have an All Father, *Mungan-ngaua*, but legendary

<sup>1</sup> Howitt, *J. A. I.*, vol. xxi., p. 797, 1883.

<sup>2</sup> Howitt, *N. T. S. E. A.*, pp. 394-96.

<sup>3</sup> *Ibid.*, pp. 780, 781.

<sup>4</sup> *Ibid.*, pp. 793, 794.

<sup>5</sup> Strehlow, *Globus*, xiii., 1907, No. 18, p. 287.

black ones, were abundant and certain in its action, black pigs might be substituted for white in the course of two or three years. If, on the other hand, it was rare and uncertain in action, the white pigs might linger on for centuries.

## CLXXXIX

A great chapter of the history of the world is written in the chalk. Few passages in the history of man can be supported by such an overwhelming mass of direct and indirect evidence as that which testifies to the truth of the fragment of the history of the globe, which I hope to enable you to read, with your own eyes, to-night. Let me add, that few chapters of human history have a more profound significance for ourselves. I weigh my words well when I assert, that the man who should know the true history of the bit of chalk which every carpenter carries about in his breeches-pocket, though ignorant of all other history, is likely, if he will think his knowledge out to its ultimate results, to have a truer, and therefore a better, conception of this wonderful universe, and of man's relation to it, than the most learned student who is deep-read in the records of humanity and ignorant of those of Nature.

## CXC

The examination of a transparent slice ~~gives~~ a good notion of the manner in which the components of the chalk are arranged, and of their relative proportions. But, by rubbing up some chalk with a brush in water and then pouring off the milky fluid, so as to obtain sediments of different degrees of fineness, the granules and the minute rounded bodies may be pretty well separated from one another, and submitted to microscopic examination, either as ~~specime~~ or as transparent objects. By combining the views obtained in these various methods, each of the rounded bodies may be proved to be a beautifully-constructed calcareous fabric, made up of

a number of chambers, communicating freely with one another. The chambered bodies are of various forms. One of the commonest is something like a badly-grown raspberry, being formed of a number of nearly globular chambers of different sizes congregated together. It is called *Globigerina*, and some specimens of chalk consist of little else than *Globigerina* and granules. Let us fix our attention upon the *Globigerina*. It is the spoor of the game we are tracking. If we can learn what it is and what are the conditions of its existence, we shall see our way to the origin and past history of the chalk.

## CXCI

It so happens that calcareous skeletons, exactly similar to the *Globigerina* of the chalk, are being formed, at the present moment, by minute living creatures, which flourish in multitude, literally more numerous than the sands of the sea-shore, over a large extent of that part of the earth's surface which is covered by the ocean.

The history of the discovery of these living *Globigerina* and of the part which they play in rock building, is singular enough. It is a discovery which, like others of no less scientific importance, has arisen, incidentally, out of work devoted to very different and exceedingly practical interests. When men first took to the sea, they speedily learned to look out for shoals and rocks; and the more the burthen of their ships increased, the more imperatively necessary it became for sailors to ascertain with precision the depth of the waters they traversed. Out of this necessity grew the use of the lead and sounding-line; and, ultimately, marine-surveying, which is the recording of the form of coasts and of the depth of the sea, as ascertained by the sounding-lead, upon charts.

## CXCI

Lieut. Brooke, of the American Navy, some years ago invented a most ingenious machine, by which a considerable portion

ancestral or pre-existing beings, *Muk-Kurnai*, half-human, half-bestial, like the Alcheringa folk, and both ideas are apparently myths explanatory of totemism. The *Muk-Kurnai* disported themselves "before men existed."<sup>1</sup>

If ever, in Australia, men had taken to feeding and worshipping ghosts, then the All Father, as too remote and too high, would have tended to dwindle into a name, like the *Ayahocan* of the *Worons*, and the *Unkulunkulu* of the *Aus*. Polytheism might have ensued, as in Africa, with a dim supreme being in the background.

Such is my present conception, roughly traced, of the origins and evolution of religion. Animism, though of enormous importance, as developing the idea of the soul, was not, apparently, the first, though, as far as sacrifice is concerned, the most potent, factor in religion. I have shown that, in my opinion, the doctrine of animism was not developed solely out of speculation on normal things such as shadows, breath, dreams, sleep, and death alone; but that experiences of a supra-normal nature, indicating the existence of human faculties as yet but imperfectly studied, also played their part.

On the whole, I am a rationalist about the rationalism of most of my masters and teachers, and deserve to be an outcast from the church anthropological of Mr. Tylor, Mr. Huxley, Mr. Herbert Spencer, Sir Alfred Lyall, and Mr. Grant Allen. But I have summarised the facts on which my opinion is based, and, for the rest, have gone where the *logos* led me. Many of the facts are of recent discovery: others are old, but have been insufficiently studied. Thus Dos Santos tells us that "the Caffres acknowledge no other gods than their monarch," meaning the Africans of Sofala or Quiteva. If we had many such instances, we might suppose that religion began in the worship of a living king, rich in *mana*. To be sure, that

form of religion could not arise save in a highly developed race with a king, or Mikado. No Australian worships a great medicine-man, though strong magic gives a man social influence, especially if accompanied by courage and sagacity. But, surely, when this passage of Dos Santos is quoted, we should also note (I have seen the circumstance ignored) that he goes on to say: "They acknowledge a God who, both in this world and the world to come, they fancy, measures out retribution for the good and evil done in this world.....Though convinced of the existence of a deity, they neither adore nor pray to him."<sup>2</sup> This being is *Mulungu*, known from Mozambique to Zanzibar.<sup>2</sup> His name covers himself, and also all that is *wakan*, *mana*, *orenda*, in Dieri *Kutchi*, in old Hebrew *Elohim*. The misfortune is that students are apt to fix their eyes on the divinised king of Sofala, without observing that Dos Santos also mentions *Molunga* or *Mulungu*; and this form of "negative hallucination," of not seeing facts that make against our theory, or our bias, is very common in anthropological and historical research.

The reader would be very greatly deceived if he were left with the impression that the All Father has no attributes except the high attributes which we have examined. There is a whole *chronique scandaleuse* about these beings, just as there is about Zeus, Apollo, Demeter, Thor, Indra, or whatever god of the old civilisations you please. The All Father may be described, now as having Emu's feet, now with only one leg; his conduct in the folklore about him is frequently grotesque, or is in plain violation of his own moral precepts; he is not much better than Zeus in the Greek temple legends. This sad position the All Father shares with all the other deities of mythology.

How are we to account for this? In

<sup>1</sup> Dos Santos, in *Pinkerton*, vol. xvi., p. 687.

<sup>2</sup> For a bibliography of him see Hoffman, *op. cit.*, pp. 56, 57, and the notes.

of the superficial layer of the sea-bottom can be scooped out and brought up from any depth to which the lead descends. In 1853, Lieut. Brooke obtained mud from the bottom of the North Atlantic, between Newfoundland and the Azores, at a depth of more than 10,000 feet, or two miles, by the help of this sounding apparatus. The specimens were sent for examination to Ehrenberg of Berlin, and to Baily of West Point, and those able microscopists found that this deep-sea mud was almost entirely composed of the skeletons of living organisms - the greater proportion of these being just like the *Globigerina* already known to occur in the chalk.

Thus far, the work had been carried on simply in the interests of science, but Lieut. Brooke's method of sounding acquired a high commercial value, when the enterprise of laying down the telegraphable between this country and the United States was undertaken. For it became a matter of immense importance to know, not only the depth of the sea over the whole line along which the cable was to be laid, but the exact nature of the bottom, so as to guard against chances of cutting or fraying the strands of that costly rope. The Admiralty consequently ordered Captain Dayman, an old friend and shipmate of mine, to ascertain the depth over the whole line of the cable, and to bring back specimens of the bottom. In former days, such a command as this might have sounded very much like one of the impossible things which the young Prince in the Fairy Tales is ordered to do before he can obtain the hand of the Princess. However, in the months of June and July, 1857, my friend performed the task assigned to him with great expedition and precision, without, so far as I know, having met with any reward of that kind. The specimens of Atlantic mud which he procured were sent to me to be examined and reported upon.

## CXCIII

The result of all these operations is that we know the contours and the nature of

the surface-soil covered by the North Atlantic for a distance of 1,700 miles from east to west, as well as we know that of any part of the dry land. It is a prodigious plain one of the widest and most even plains in the world. If the sea were drained off, you might drive a wagon all the way from Valentia, on the west coast of Ireland, to Trinity Bay in Newfoundland. And, except upon one sharp incline about 200 miles from Valentia, I am not quite sure that it would even be necessary to put the skid on, so gentle are the ascents and descents upon that long route. From Valentia the road would lie down-hill for about 200 miles to the point at which the bottom is now covered by 1,700 fathoms of sea-water. Then would come the central plain, more than a thousand miles wide, the inequalities of the surface of which would be hardly perceptible, though the depth of water upon it now varies from 10,000 to 15,000 feet; and there are places in which Mont Blanc might be sunk without showing its peak above water. Beyond this, the ascent on the American side commences, and gradually leads, for about 300 miles, to the Newfoundland shore.

## CXCIV

When we consider that the remains of more than three thousand distinct species of aquatic animals have been discovered among the fossils of the chalk, that the great majority of them are of such forms as are now met with only in the sea, and that there is no reason to believe that any one of them inhabited fresh water the collateral evidence that the chalk represents an ancient sea-bottom acquires as great force as the proof derived from the nature of the chalk itself. If you will now allow that I did not overstate my case when I asserted that we have strong grounds for believing that all the vast area of dry land, at present occupied by the chalk, was once at the bottom of the sea, as we have for any matter of history whatever; while there is no justification for any other belief.

the first place, the savage, like people who ought to know better, is very capable of "clowning" his own most serious conceptions, just as mediæval Catholicism was capable of grotesque buffooneries in churches, while mediæval stories of the saints, and of personages even more sacred, are familiar and farcical. This tendency is a fact in human nature.

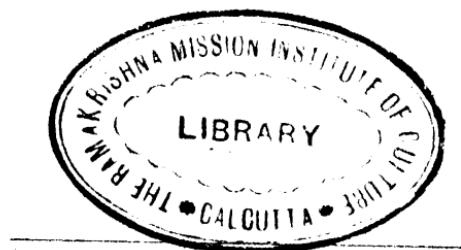
Again, savage rites and dances are a kind of "mystery plays" and *ballets d'action*. Many of them have a magical purpose, and their original sense comes to be forgotten; but, as Baiame or Daramulun is credited with having initiated the plays and dances, it is usual to explain them as commemorative of some adventure of his; and adventure may be grotesque or immoral. Any student of the Eleusinian rites will see that they were, in origin, magical rites to secure fertility. Such rites may be grotesque or immoral, but the Greeks regarded them as commemorating adventures of Demeter, Baubo, Zeus, or Dionysus, who were fabled to have

initiated the rites; and thus arose the unseemly myths about divine incests and buffooneries.

Once more, Greek myth knew, though Homer is silent, tales of amours of Zeus or Apollo in the shape of a dog, a bull, a swan, and so forth. Probably these arose out of totemism. A kin or tribe had once been fabled to descend from its totem. But all men, and, later, all kings, were children of Zeus. It was at last explained that the totem—bull, dog, swan, or what not—was Zeus or Apollo disguised in that shape; thus Helen, the daughter of the Swan (in some myths), was the daughter of Zeus in the shape of a swan.

On these lines I would explain the growth of the absurd and unseemly myths, savage, Vedic, or classical.

See, against me, Mr. Sidney Hartland, *Folk Lore*, IX. (1898), pp. 294-311. I replied in *Folk Lore*, X., pp. 1-45, and in *Myth, Ritual, and Religion*, new edition, Vol. I., pp. xvii-xxii.



No less certain it is that the time during which the countries we now call south-east England, France, Germany, Poland, Russia, Egypt, Arabia, Syria, were more or less completely covered by a deep sea, was of considerable duration. We have already seen that the chalk is, in places, more than a thousand feet thick. I think you will agree with me that it must have taken some time for the skeletons of animalcules of a hundredth of an inch in diameter to heap up such a mass as that.

## CXCV

If the decay of the soft parts of the sea-urchin; the attachment, growth to maturity, and decay of the *Crusta*; and the subsequent attachment and growth of the coralline, took a year (which is a low estimate enough), the accumulation of the inch of chalk must have taken more than a year: and the deposit of a thousand feet of chalk must, consequently, have taken more than twelve thousand years.

## CXCVI

There is a writing upon the wall of cliffs at Cromer, and whoso runs may read it. It tells us, with an authority which cannot be impeached, that the ancient sea-bed of the chalk sea was raised up, and remained dry land, until it was covered with forest, stocked with the great game the spoils of which have rejoiced your geologists. How long it remained in that condition cannot be said; but "the whirling of time brought its revenges" in those days as in these. That dry land, with the bones and teeth of generations of long-lived elephants, hidden away among the gnarled roots and dry leaves of its ancient trees, sank gradually to the bottom of the icy sea, which covered it with huge masses of drift and boulder clay. Sea-beasts, such as the walrus, now restricted to the extreme north, paddled about where birds had twittered among the topmost twigs of the fir-trees. How long this state of things endured we know not, but at length it

came to an end. The upheaved glacial mud hardened into the soil of modern Norfolk. Forests grew once more, the wolf and the beaver replaced the reindeer and the elephant; and at length what we call the history of England dawned.

## CXCVII

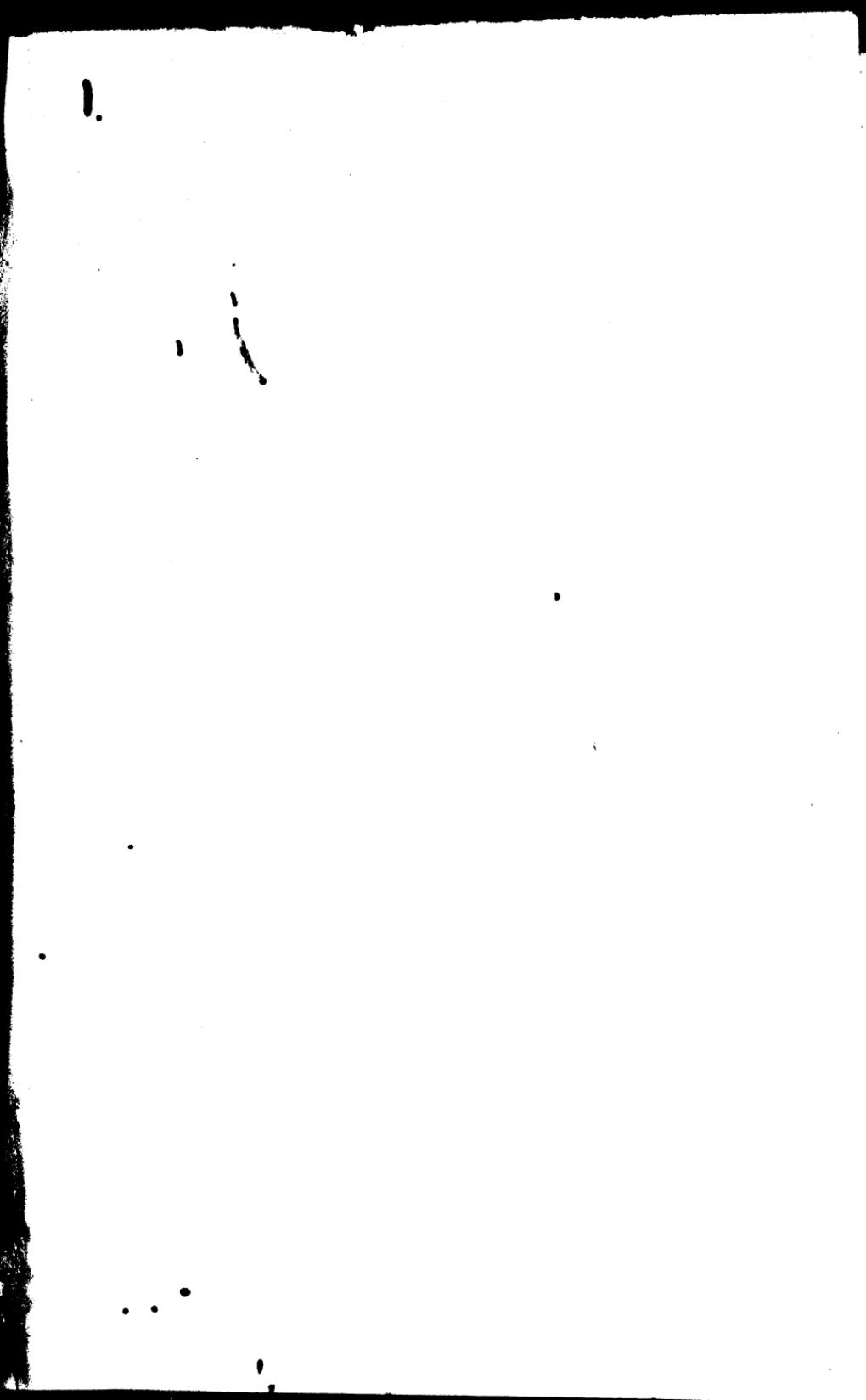
Direct proof may be given that some parts of the land of the northern hemisphere are at this moment insensibly rising and others insensibly sinking; and there is indirect, but perfectly satisfactory, proof, that an enormous area now covered by the Pacific has been deepened thousands of feet, since the present inhabitants of that sea came into existence. Thus there is not a shadow of a reason for believing that the physical changes of the globe, in past times, have been effected by other than natural causes.

## CXCVIII

A small beginning has led us to a great ending. If I were to put the bit of chalk with which we started into the hot but obscure flame of burning hydrogen, it would presently shine like the sun. It seems to me that this physical metamorphosis is no false image of what has been the result of our subjecting it to a jet of fervent, though nowise brilliant, thought to-night. It has become luminous, and its clear rays, penetrating the abyss of the remote past, have brought within our ken some stages of the evolution of the earth. And in the shifting "without haste, but without rest" of the land and sea, as in the endless variation of the forms assumed by living beings, we have observed nothing but the natural product of the forces originally possessed by the substance of the universe.

## CXCIX

In certain parts of the sea bottom in the immediate vicinity of the British Islands, as in the Clyde district, among the Hebrides, in the Moray Firth, and in the German Ocean, there are depressed areas, forming



a kind of submarine valleys, the centres of which are from 80 to 100 fathoms, or more, deep. These depressions are inhabited by assemblages of marine animals, which differ from those found over the adjacent and shallower region, and resemble those which are met with much farther north, on the Norwegian coast. Forbes called these Scandinavian detachments "Northern outliers."

How did these isolated patches of a northern population get into these deep places? To explain the mystery, Forbes called to mind the fact that, in the epoch which immediately preceded the present, the climate was much colder (whence the name of "glacial epoch" applied to it); and that the shells which are found fossil, or sub-fossil, in deposits of that age are precisely such as are now to be met with only in the Scandinavian, or still more Arctic, regions. Undoubtedly, during the glacial epoch, the general population of our seas had, universally, the northern aspect which is now presented only by the "northern outliers"; just as the vegetation of the land, down to the sea-level, had the northern character which is, at present, exhibited only by the plants which live on the tops of our mountains. But as the glacial epoch passed away, and the present climatal conditions were developed, the northern plants were able to maintain themselves only on the bleak heights, on which southern forms could not compete with them. And, in like manner, Forbes suggested that, after the glacial epoch, the northern animals then inhabiting the sea became restricted to the deeps in which they could hold their own against invaders from the south, better fitted than they to flourish in the warmer waters of the shallows. Thus depth in the sea corresponded in its effect upon distribution to height on the land.

CC

Among the scientific instructions for the voyage drawn up by a committee of the

<sup>1</sup> Of the *Challenger*.

Royal Society, there is a remarkable letter from Von Humboldt to Lord Minto, then First Lord of the Admiralty, in which, among other things, he dwells upon the significance of the researches into the microscopic composition of rocks, and the discovery of the great share which microscopic organisms take in the formation of the crust of the earth at the present day, made by Ehrenberg in the years 1836-39. Ehrenberg, in fact, had shewn that the extensive beds of "rotten-stone" or "Tripoli" which occur in various parts of the world, and notably at Böhmen in Bohemia, consisted of accumulations of the siliceous cases and skeletons of *Diatomaceæ*, sponges, and *Radiolaria*; he had proved that similar deposits were being formed by *Diatomaceæ*, in the pools of the Thiergarten in Berlin and elsewhere, and had pointed out that, if it were commercially worth while, rotten-stone might be manufactured by a process of diatom-culture. Observations conducted at Cuxhaven, in 1839, had revealed the existence, at the surface of the waters of the Baltic, of living *Diatoms* and *Radiolaria* of the same species as those which, in a fossil state, constitute extensive rocks of tertiary age at Callanissetta, Zante, a Oran, on the shores of the Mediterranean.

Moreover, in the fresh-water rotten-stone beds of Böhmen, Ehrenberg had traced out the metamorphosis, effected apparently by the action of percolating water, of the primitively loose and friable deposit of organised particles, in which the silex exists in the hydrated or soluble condition. The silex, in fact, undergoes solution and slow redeposition, until, in ultimate result, the excessively fine-grained sand, each particle of which is a skeleton, becomes converted into a dense opaline stone, with only here and there an indication of an organism.

From the consideration of these facts, Ehrenberg, as early as the year 1839, had arrived at the conclusion that rocks, altogether similar to those which constitute a large part of the crust of the earth, must be forming, at the present day, at the bottom of the sea; and he threw out the

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suggestion that even where no trace of organic structure is to be found in the older rocks, it may have been lost by metamorphosis.

## CCI

It is highly creditable to the ingenuity of our ancestors that the peculiar property of fermented liquids, in virtue of which they "make glad the heart of man," seems to have been known in the remotest periods of which we have any record. All savages take to alcoholic fluids as if they were to the mother-brown. Our Vedic forefathers intoxicated themselves with the juice of the "soma": Noah, by a not unnatural reaction against a superfluity of water, appears to have taken the earliest practicable opportunity of qualifying that which he was obliged to drink; and the ghosts of the ancient Egyptians were solaced by pictures of banquets in which the wine-cup passes round, graven on the walls of their tombs. A knowledge of the process of fermentation, therefore, was in all probability possessed by the prehistoric populations of the globe; and it must have become a matter of great interest even to pramaval wine-bibbers to study the methods by which fermented liquids could be surely manufactured. No doubt it was soon discovered that the most certain, as well as the most expeditious, way of making a sweet juice-ferment was to add to it a little of the scum, or lees, of another fermenting juice. And it can hardly be questioned that this singular excitation of fermentation in one fluid, by a sort of infection, or inoculation, of a little ferment taken from some other fluid, together with the strange swelling, foaming, and hissing of the fermented substance, must have always attracted attention from the more thoughtful. Nevertheless, the commencement of the scientific analysis of the phenomena dates from a period not earlier than the first half of the seventeenth century.

At this time, Van Helmont made a first step by pointing out that the peculiar

hissing and bubbling of a fermented liquid is due, not to the evolution of common air (which he, as the inventor of the term "gas," calls "*gas ventosum*"), but to that of a peculiar kind of air such as is occasionally met with in caves, mines, and wells, and which he calls "**gas sylvestre**."

But a century elapsed before the nature of this "*gas sylvestre*," or, as it was afterwards called, "fixed air," was clearly determined, and it was found to be identical with that deadly "choke-damp" by which the lives of those who descend into old wells, or mines, or brewers' vats, are sometimes suddenly ended; and with the poisonous aëroform fluid which is produced by the combustion of charcoal, and now goes by the name of carbonic acid gas.

During the same time it gradually became evident that the presence of sugar was essential to the production of alcohol and the evolution of carbonic acid gas, which are the two great and conspicuous products of fermentation. And finally, in 1737, the Italian chemist, Fabroni, made the capital discovery that the yeast ferment, the presence of which is necessary to fermentation, is what he termed a "*vegeto-animal*" substance: that is, a body which gives off ammoniacal salts when it is burned, and is, in other ways, similar to the gluten of plants and the albumen and casein of animals.

## CCII

The living club-mosses are, for the most part, insignificant and creeping herbs, which, superficially, very closely resemble true mosses, and none of them reach more than two or three feet in height. But in their essential structure, they very closely resemble the earliest *Lepidodendron* trees of the coal: their stems and leaves are similar; so are their cones; and no less like are the sporangia and spores; while even in their size, the spores of the *Lepidodendron* and those of the existing *Lycopodium*, or club-moss, very closely approach one another.



Thus the singular conclusion is forced upon us, that the greater and the smaller sacs of the "Better-Bed" and other coals, in which the primitive structure is well preserved, are simply the sporangia and spores of certain plants, many of which were closely allied to the existing club-mosses. And if, as I believe, it can be demonstrated that ordinary coal is nothing but "saccular" coal which has undergone a certain amount of that alteration which, if continued, would convert it into anthracite; then, the conclusion is obvious, that the great mass of the coal we burn is the result of the accumulation of the spores and spore-cases of plants, other parts of which have furnished the carbonised stems and the mineral charcoal, or have left their impressions on the surfaces of the layer.

## CCIII

The position of the beds which constitute the coal-measures is infinitely diverse. Sometimes they are tilted up vertically, sometimes they are horizontal, sometimes curved into great basins; sometimes they come to the surface, sometimes they are covered up by thousands of feet of rock. But, whatever their present position, there is abundant and conclusive evidence that every under-clay was once a surface soil. Not only do carbonised root-fibres frequently abound in these under-clays; but the stools of trees, the trunks of which are broken off and confounded with the bed of coal, have been repeatedly found passing into radiating roots, still embedded in the under-clay. On many parts of the coast of England, what are commonly known as "submarine forests" are to be seen at low water. They consist, for the most part, of short stools of oak, beech, and firs, still fixed by their long roots in the bed of blue clay in which they originally grew. If one of these submarine forest beds should be gradually depressed and covered up by new deposits, it would present just the same characters as an under-clay of the coal, if the *Sigillaria* and

*Lepidodendron* of the ancient world were substituted for the oak, or the beech, of our own times.

In a tropical forest, at the present day, the trunks of fallen trees, and the stools of such trees as may have been broken by the violence of storms, remain entire for but a short time. Contrary to what might be expected, the dense wood of the tree decays, and suffers from the ravages of insects, more swiftly than the bark. And the traveller, setting his foot on a prostrate trunk finds that it is a mere shell, which breaks under his weight, and lands his foot amidst the insects, or the reptiles, which have sought food or refuge within.

## CCIV

The coal accumulated upon the area covered by one of the great forests of the carboniferous epoch would, in course of time, have been wasted away by the small, but constant, wear and tear of rain and streams, had the land which supported it remained at the same level, or been gradually raised to a greater elevation. And, no doubt, as much coal as now exists has been destroyed, after its formation, in this way.

## CCV

Once more, an invariably-recurring lesson of geological history, at whatever point its study is taken up: the lesson of the almost infinite slowness of the modification of living forms. The lines of the pedigrees of living things break off almost before they begin to converge.

## CCVI

Yet another curious consideration. Let us suppose that one of the stupid, salamander-like *Labyrinthodonts*, which pottered, with much belly and little leg, like Falstaff in his old age, among the coal-forests, could have had thinking power enough in his small brain to reflect upon the showers of spores which kept on

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falling through years and centuries, while perhaps not one in ten million fulfilled its apparent purpose, and reproduced the organism which gave it birth: surely he might have been excused for moralising upon the thoughtless and wanton extravagance which Nature displayed in her operations.

But we have the advantage over our shovel-headed predecessor or possibly ancestor—and can perceive that a certain vein of thrift runs through this apparent prodigality. Nature is never in a hurry, and seems to have had always before her eyes the adage, "Keep a thing long enough, and you will find a use for it." She has kept her beds of coal many millions of years without being able to find much use for them; she has sent them down beneath the sea, and the sea-beasts could make nothing of them; she has raised them up into dry land, and laid the black veins bare, and still for ages and ages, there was no living thing on the face of the earth that could see any sort of value in them; and it was only the other day, so to speak, that she turned a new creature out of her workshop, who by degrees acquired sufficient wits to make a fire, and then to discover that the black rock would burn.

I suppose that nineteen hundred years ago, when Julius Caesar was good enough to deal with Britain as we have dealt with New Zealand, the primeval Briton, blue with cold and woad, may have known that the strange black stone, of which he found lumps here and there in his wanderings, would burn and so help to warm his body and cook his food. Saxon, Dane, and Norman swarmed into the land. The English people grew into a powerful nation, and Nature still waited for a full return of the capital she had invested in the ancient club-mosses. The eighteenth century arrived, and with it James Watt. The brain of that man was the spore out of which was developed the modern steam-engine, and all the prodigious trees and branches of modern industry which have grown out of this. But coal is as much an

essential condition of this growth and development as carbonic acid is for that of a club-moss. Wanting coal, we could not have smelted the iron needed to make our engines, nor have worked our engines when we had got them. But take away the engines, and the great towns of Yorkshire and Lancashire vanish like a dream. Manufactures give place to agriculture and pasture, and not ten men can live where now ten thousand are amply supported.

Thus, all this abundant wealth of money and of vivid life is Nature's interest upon her investment in club-mosses, and the like, so long ago. But what becomes of the coal which is burnt in yielding this interest? Heat comes out of it, light comes out of it; and if we could gather together all that goes up the chimney, and all that remains in the grate of a thoroughly-burnt coal-fire, we should find ourselves in possession of a quantity of carbonic acid, water, ammonia, and mineral matter, exactly equal in weight to the coal. But these are the very matters with which Nature supplied the club-mosses which made the coal. She is paid back principal and interest at the same time; and she straightway invests the carbonic acid, the water, and the ammonia in new forms of life, feeding with them the plants that now live. Thrifty Nature! Surely no prodigal, but most notable of housekeepers!

## CCVII

Here, then, is a capital fact. The movements of the lobster are due to muscular contractility. But why does a muscle contract at one time and not at another? Why does one whole group of muscles contract when the lobster wishes to extend his tail, and another group when he desires to bend it? What is it originates, directs, and controls the motive power?

Experiment, the great instrument for the ascertaining of truth in physical science, answers this question for us. In the head of the lobster there lies a small mass of that peculiar tissue which is known as nervous substance. Cords of similar matter

connect this brain of the lobster, directly or indirectly, with the muscles. Now, if these communicating cords are cut, the brain remaining entire, the power of exerting what we call voluntary motion in the parts below the section is destroyed ; and on the other hand, if, the cords remaining entire, the brain mass be destroyed, the same voluntary mobility is equally lost. Whence the inevitable conclusion is that the power of originating these motions resides in the brain and is propagated along the nervous cords.

In the higher animals the phenomena which attend this transmission have been investigated, and the exertion of the peculiar energy which resides in the nerves has been found to be accompanied by a disturbance of the electrical state of their molecules.

If we could exactly estimate the significance of this disturbance ; if we could obtain the value of a given exertion of nerve force by determining the quantity of electricity, or of heat, of which it is the equivalent ; if we could ascertain upon what arrangement, or other condition of the molecules of matter, the manifestation of the nervous and muscular energies depends (and doubtless science will some day or other ascertain these points), physiologists would have attained their ultimate goal in this direction ; they would have determined the relation of the motive force of animals to the other forms of force found in nature ; and if the same process had been successfully performed for all the operations which are carried on in, and by, the animal frame, physiology would be perfect, and the facts of morphology and distribution would be deducible from the laws which physiologists had established, combined with those determining the condition of the surrounding universe.

## CC.VIII

The object of lectures is, in the first place, to awaken the attention and excite the enthusiasm of the student ; and this, I am sure, may be effected to a far greater

extent by the oral discourse and by the personal influence of a respected teacher than in any other way. Secondly, lectures have the double use of guiding the student to the salient points of a subject, and at the same time forcing him to attend to the whole of it, and not merely to that part which takes his fancy. And lastly, lectures afford the student the opportunity of seeking explanations of those difficulties which will, and indeed ought to, arise in the course of his studies.

## CCIX

What books shall I read ? is a question constantly put by the student to the teacher. My reply usually is, " None : write your notes out carefully and fully ; strive to understand them thoroughly ; come to me for the explanation of anything you cannot understand ; and I would rather you did not distract your mind by reading." A properly composed course of lectures ought to contain fully as much matter as a student can assimilate in the time occupied by its delivery ; and the teacher should always recollect that his business is to feed, and not to cram the intellect. Indeed, I believe that a student who gains from a course of lectures the simple habit of concentrating his attention upon a definitely limited series of facts, until they are thoroughly mastered, has made a step of immeasurable importance.

## CCX

However good lectures may be, and however extensive the course of reading by which they are followed up, they are but accessories to the great instrument of scientific teaching—demonstration. If I insist unweariedly, nay fanatically, upon the importance of physical science as an educational agent, it is because the study of any branch of science, if properly conducted, appears to me to fill up a void left by all other means of education. I have the greatest respect and love for literature ; nothing would grieve me more than to see

literary training other than a very prominent branch of education: indeed, I wish that real literary discipline were far more attended to than it is; but I cannot shut my eyes to the fact that there is a vast difference between men who have had a purely literary, and those who have had a sound scientific training.

## CCXI

In the world of letters, learning and knowledge are one, and books are the source of both; whereas in science, as in life, learning and knowledge are distinct, and the study of things, and not of books, is the source of the latter.

## CCXII

All that literature has to bestow may be obtained by reading and by practical exercise in writing and in speaking: but I do not exaggerate when I say that none of the best gifts of science are to be won by these means. On the contrary, the great benefit which a scientific education bestows, whether as training or as knowledge, is dependent upon the extent to which the mind of the student is brought into immediate contact with facts upon the degree to which he learns the habit of appealing directly to Nature, and of acquiring through his senses concrete images of those properties of things, which are, and always will be, but approximatively expressed in human language. Our way of looking at Nature, and of speaking about her, varies from year to year; but a fact once seen, a relation of cause and effect, once demonstratively apprehended, are possessions which neither change nor pass away, but, on the contrary, form fixed centres, about which other truths aggregate by natural affinity.

Therefore, the great business of the scientific teacher is, to imprint the fundamental, irrefragable facts of his science, not only by words upon the mind, but by sensible impressions upon the eye, and ear,

and touch of the student, in so complete a manner, that every term used or law enunciated should afterwards call up vivid images of the particular structural, or other, facts which furnished the demonstration of the law, or the illustration of the term.

## CCXIII

What is the purpose of primary intellectual education? I apprehend that its first object is to train the young in the use of those tools wherewith men extract knowledge from the ever-shifting succession of phenomena which pass before their eyes; and that its second object is to inform them of the fundamental laws which have been found by experience to govern the course of things, so that they may not be turned out into the world naked, defenceless, and a prey to the events they might control.

A boy is taught to read his own and other languages, in order that he may have access to infinitely wider stores of knowledge than could ever be opened to him by oral intercourse with his fellow men; he learns to write, that his means of communication with the rest of mankind may be indefinitely enlarged, and that he may record and store up the knowledge he acquires. He is taught elementary mathematics, that he may understand all those relations of number and form upon which the transactions of men, associated in complicated societies, are built, and that he may have some practice in deductive reasoning.

All these operations of reading, writing, and ciphering are intellectual tools, whose use should, before all things, be learned, and learned thoroughly; so that the youth may be enabled to make his life that which it ought to be, a continual progress in learning and in wisdom.

## CCXIV

In addition, primary education endeavours to fit a boy out with a certain equipment of positive knowledge. He is taught the great laws of morality; the

religion of his sect ; so much history and geography as will tell him where the great countries of the world are, what they are, and how they have become what they are.

But if I regard it closely, a curious reflection arises. I suppose that, fifteen hundred years ago, the child of any well-to-do Roman citizen was taught just these same things ; reading and writing in his own, and, perhaps, the Greek tongue ; the elements of mathematics ; and the religion, morality, history, and geography current in his time. Furthermore, I do not think I err in affirming that, if such a Christian Roman boy, who had finished his education, could be transplanted into one of our public schools, and pass through its course of instruction, he would not meet with a single unfamiliar line of thought ; amidst all the new facts he would have to learn, not one would suggest a different mode of regarding the universe from that current in his own time.

And yet surely there is some great difference between the civilisation of the fourth century and that of the nineteenth, and still more between the intellectual habits and tone of thought of that day and this ?

And what has made this difference ? I answer fearlessly The prodigious development of physical science within the last two centuries.

## CCXV

Modern civilisation rests upon physical science ; take away her gifts to our own country, and our position among the leading nations of the world is gone to-morrow ; for it is physical science only that makes intelligence and moral energy stronger than brute force.

## CCXVI

The whole of modern thought is steeped in science ; it has made its way into the works of our best poets, and even the mere

man of letters, who affects to ignore and despise science, is unconsciously impregnated with her spirit, and indebted for his best products to her methods. I believe that the greatest intellectual revolution mankind has yet seen is now slowly taking place by her agency. She is teaching the world that the ultimate court of appeal is observation and experiment, and not authority ; she is teaching it to estimate the value of evidence ; she is creating a firm and living faith in the existence of immutable moral and physical laws, perfect obedience to which is the highest possible aim of an intelligent being.

But of all this your old stereotyped system of education takes no note. Physical science, its methods, its problems and its difficulties, will meet the poorest boy at every turn, and yet we educate him in such a manner that he shall enter the world as ignorant of the existence of the methods and facts of science as the day he was born. The modern world is full of artillery ; and we turn out our children to do battle in it, equipped with the shield and sword of an ancient gladiator.

## CCXVII

Posterity will cry shame on us if we do not remedy this deplorable state of things Nay, if we live twenty years longer, our own consciences will cry shame on us.

It is my firm conviction that the only way to remedy it is to make the element of physical science an integral part of primary education. I have endeavoured to show you how that may be done for that branch of science which it is my business to pursue ; and I can but add, that I should look upon the day when every schoolmaster throughout this land was a centre of genuine, however rudimentary, scientific knowledge as an epoch in the history of the country.

But let me entreat you to remember my last words. Addressing myself to you, as teachers, I would say, mere book learning in physical science is a sham and a delusion

—what you teach, unless you wish to be impostors, that you must first know ; and real knowledge in science means personal acquaintance with the facts, be they few or many.

## CCXVIII

The first distinct enunciation of the hypothesis that all living matter has sprung from pre-existing living matter came from a contemporary, though a junior, of Harvey, a native of that country, fertile in men great in all departments of human activity, which was to intellectual Europe, in the sixteenth and seventeenth centuries, what Germany is in the nineteenth. It was in Italy, and from Italian teachers, that Harvey received the most important part of his scientific education. And it was a student trained in the same schools, Francesco Redi—a man of the widest knowledge and most versatile abilities, distinguished alike as scholar, poet, physician and naturalist who, just two hundred and two years ago,<sup>1</sup> published his "Esperienze intorno alla Generazione degl' Insetti," and gave to the world the idea, the growth of which it is my purpose to trace. Redi's book went through five editions in twenty years ; and the extreme simplicity of his experiments, and the clearness of his arguments, gained for his views and for their consequences, almost universal acceptance.

Redi did not trouble himself much with speculative considerations, but attacked particular cases of what was supposed to be "spontaneous generation" experimentally. Here are dead animals, or pieces of meat, says he ; I expose them to the air in hot weather, and in a few days they swarm with maggots. You tell me that these are generated in the dead flesh ; but if I put similar bodies, while quite fresh, in a jar, and tie some fine gauze over the top of the jar, not a maggot makes its appearance, while the dead substances, nevertheless, putrefy just in the same way as before. It is obvious, therefore, that the maggots

are not generated by the corruption of the meat ; and that the cause of their formation must be a something which is kept away by gauze. But gauze will not keep away aërial bodies or fluids. This something must, therefore, exist in the form of solid particles too big to get through the gauze. Nor is one long left in doubt what these solid particles are ; for the blow-flies, attracted by the odour of the meat, swarm round the vessel, and, urged by a powerful but in this case misleading instinct, lay eggs out of which maggots are immediately hatched upon the gauze. The conclusion, therefore, is unavoidable ; the maggots are not generated by the meat, but the eggs which give rise to them are brought through the air by the flies.

These experiments seem almost childishly simple, and one wonders how it was that no one ever thought of them before. Simple as they are, however, they are worthy of the most careful study, for every piece of experimental work since done, in regard to this subject, has been shaped upon the model furnished by the Italian philosopher. As the results of his experiments were the same, however varied the nature of the materials he used, it is not wonderful that there arose in Redi's mind a presumption that, in all such cases of the seeming production of life from dead matter, the real explanation was the introduction of living germs from without into that dead matter. And thus the hypothesis that living matter always arises by the agency of pre-existing living matter, took definite shape ; and had, henceforward, a right to be considered and a claim to be refuted, in each particular case, before the production of living matter in any other way could be admitted by careful reasoners. It will be necessary for me to refer to this hypothesis so frequently, that, to save circumlocution, I shall call it the hypothesis of *Biogenesis* ; and I shall term the contrary doctrine—that living matter may be produced by not living matter—the hypothesis of *Abiogenesis*.

In the seventeenth century, as I have said, the latter was the dominant view, sanctioned alike by antiquity and by authority ;

<sup>1</sup> These words were written in 1870.

and it is interesting to observe that Redi did not escape the customary tax upon a discoverer of having to defend himself against the charge of impugning the authority of the Scriptures ; for his adversaries declared that the generation of bees from the carcase of a dead lion is affirmed, in the Book of Judges, to have been the origin of the famous riddle with which Samson perplexed the Philistines : -

"Out of the eater came forth meat,  
And out of the strong came forth sweetness."

## CCXIX

The great tragedy of Science - the slaying of a beautiful hypothesis by an ugly fact.

## CCXX

It remains yet in the order of logic, though not of history, to show that among these solid destructive particles there really do exist germs capable of giving rise to the development of living forms in suitable menstrua. This piece of work was done by M. Pasteur in those beautiful researches which will ever render his name famous ; and which, in spite of all attacks upon them, appear to me now, as they did seven years ago, to be models of accurate experimentation and logical reasoning. He strained air through cotton-wool, and found, as Schroeder and Dusch had done, that it contained nothing competent to give rise to the development of life in fluids highly fitted for that purpose. But the important further links in the chain of evidence added by Pasteur are three. In the first place he subjected to microscopic examination the cotton-wool which has served as strainer, and found that sundry bodies clearly recognisable as germs were among the solid particles strained off. Secondly, he proved that these germs were competent to give rise to living forms by simply sowing them in a solution fitted for their development. And, thirdly, he showed that the incapacity of air strained through cotton-wool to give rise to life was not due

to any occult change effected in the constituents of the air by the wool, by proving that the cotton-wool might be dispensed with altogether, and perfectly free access left between the exterior air and that in the experimental flask. If the neck of the flask is drawn out into a tube and bent downwards ; and if, after the contained fluid has been carefully boiled, the tube is heated sufficiently to destroy any germs which may be present in the air which enters as the fluid cools, the apparatus may be left to itself for any time and no life will appear in the fluid. The reason is plain. Although there is free communication between the atmosphere laden with germs and the germless air in the flask, contact between the two takes place only in the tube ; and as the germs cannot fall upwards, and there are no currents, they never reach the interior of the flask. But if the tube be broken short off where it proceeds from the flask, and free access be thus given to germs falling vertically out of the air, the fluid, which has remained clear and desert for months, becomes, in a few days, turbid and full of life.

## CCXXI

In autumn it is not uncommon to see flies motionless upon a window-pane, with a sort of magic circle, in white, drawn round them. On microscopic examination, the magic circle is found to consist of innumerable spores, which have been thrown off in all directions by a minute fungus called *Empusa musae*, the spore-forming filaments of which stand out like a pile of velvet from the body of the fly. These spore-forming filaments are connected with others which fill the interior of the fly's body like so much fine wool, having eaten away and destroyed the creature's viscera. This is the full-grown condition of the *Empusa*. If traced back to its earliest stages, in flies which are still active, and to all appearance healthy, it is found to exist in the form of minute corpuscles which float in the blood of the

fly. These multiply and lengthen into filaments, at the expense of the fly's substance; and when they have at last killed the patient, they grow out of its body and give off spores. Healthy flies shut up with diseased ones catch this mortal disease, and perish like the others. A most competent observer, M. Cohn, who studied the development of the *Empusa* very carefully, was utterly unable to discover in what manner the smallest germs of the *Empusa* got into the fly. The spores could not be made to give rise to such germs by cultivation; nor were such germs discoverable in the air, or in the food of the fly. It looked exceedingly like a case of *Abiogenesis*, or, at any rate, of *Xenogenesis*; and it is only quite recently that the real course of events has been made out. It has been ascertained that when one of the spores falls upon the body of a fly, it begins to germinate, and sends out a process which bores its way through the fly's skin; this, having reached the interior cavities of its body, gives off the minute floating corpuscles which are the earliest stage of the *Empusa*. The disease is "contagious," because a healthy fly coming in contact with a diseased one, from which the spore-bearing filaments protrude, is pretty sure to carry off a spore or two. It is "infectious" because the spores become scattered about all sorts of matter in the neighbourhood of the slain flies.

Silkworms are liable to many diseases; and, even before 1853, a peculiar epizootic, frequently accompanied by the appearance of dark spots upon the skin (whence the name of "Pébrine" which it has received), had been noted for its mortality. But in the years following 1853 this malady broke out with such extreme violence, that, in 1858, the silk-crop was reduced to a third of the amount which it had reached in 1853; and, up till within the last year or two, it has never attained half the yield of 1853. This means not only that the great number of people engaged in silk growing are some thirty millions sterling poorer than they might have been; it

means not only that high prices have had to be paid for imported silkworm eggs, and that, after investing his money in them, in paying for mulberry-leaves and for attendance, the cultivator has constantly seen his silkworms perish and himself plunged in ruin; but it means that the looms of Lyons have lacked employment, and that, for years, enforced idleness and misery have been the portion of a vast population which, in former days, was industrious and well-to-do.

In reading the Report made by M. de Quatrefages in 1859, it is exceedingly interesting to observe that his elaborate study of the *Pébrine* forced the conviction upon his mind that, in its mode of occurrence and propagation, the disease of the silkworm is, in every respect, comparable to the cholera among mankind. But it differs from the cholera, and so far is a more formidable malady, in being hereditary, and in being, under some circumstances, contagious as well as infectious.

The Italian naturalist, Filippi, discovered in the blood of the silkworms affected by this strange disorder a multitude of cylindrical corpuscles, each about  $\frac{1}{400}$ th of an inch long. These have been carefully studied by Lebeau, and named by him *Panthophytin*; for the reason that in subjects in which the disease is strongly developed, the corpuscles swarm in every tissue and organ of the body, and even pass into the undeveloped eggs of the female moth. But are these corpuscles causes, or mere concomitants, of the disease? Some naturalists took one view and some another; and it was not until the French Government, alarmed by the continued ravages of the malady, and the inefficiency of the remedies which had been suggested, despatched M. Pasteur to study it, that the question received its final settlement; at a great sacrifice, not only of the time and peace of mind of that eminent philosopher, but, I regret to have to add, of his health.

But the sacrifice has not been in vain. It is now certain that this devastating, cholera-like *Pébrine* is the effect of the

growth and multiplication of the *Panhisterophyton* in the silkworm. It is contagious and infectious, because the corpuscles of the *Panhisterophyton* pass away from the bodies of the diseased caterpillars, directly or indirectly, to the alimentary canal of healthy silkworms in their neighbourhood; it is hereditary because the corpuscles enter into the eggs while they are being formed, and consequently are carried within them when they are laid; and for this reason, also, it presents the very singular peculiarity of being inherited only on the mother's side. There is not a single one of all the apparently capricious and unaccountable phenomena presented by the Pébrine but has received its explanation from the fact that the disease is the result of the presence of the microscopic organism, *Panhisterophyton*.

## CCXXVII

I commenced this Address by asking you to follow me in an attempt to trace the path which has been followed by a scientific idea, in its long and slow progress from the position of a probable hypothesis to that of an established law of nature. Our survey has not taken us into very attractive regions; it has lain, chiefly, in a land flowing with the abominable, and peopled with mere grubs and mouldiness. And it may be imagined with what smiles and shrugs, practical and serious contemporaries of Redi and of Spallanzani may have commented on the waste of their high abilities in toiling at the solution of problems which, though curious enough in themselves, could be of no conceivable utility to mankind.

Nevertheless, you will have observed that before we had travelled very far upon our road, there appeared, on the right hand and on the left, fields laden with a harvest of golden grain, immediately convertible into those things which the most solidly practical men will admit to have value *viz.*, money and life.

The direct loss to France caused by the Pébrine in seventeen years cannot be esti-

mated at less than fifty millions sterling; and if we add to this what Redi's idea, in Pasteur's hands, has done for the wine-grower and for the vinegar-maker, and try to capitalise its value, we shall find that it will go a long way towards repairing the money losses caused by the frightful and calamitous war of this autumn (1870). And as to the equivalent of Redi's thought in life, how can we overestimate the value of that knowledge of the nature of epidemic and epizootic diseases, and consequently of the means of checking, or eradicating them, the dawn of which has assuredly commenced?

Looking back no further than ten years, it is possible to select three (1863, 1864, and 1869) in which the total number of deaths from scarlet fever alone amounted to ninety thousand. That is the return of killed, the maimed and disabled being left out of sight. Why, it is to be hoped that the list of killed in the present bloodiest of all wars will not amount to more than this! But the facts which I have placed before you must leave the least sanguine without a doubt that the nature and the causes of this scourge will, one day, be as well understood as those of the Pébrine are now, and that the long-suffered massacre of our innocents will come to an end.

And thus mankind will have one more admonition that "the people perish for lack of knowledge"; and that the alleviation of the miseries, and the promotion of the welfare, of men must be sought, by those who will not lose their pains, in that diligent, patient, loving study of all the multitudinous aspects of Nature, the results of which constitute exact knowledge, or Science.

## CCXXVIII

I find three, more or less contradictory, systems of geological thought, each of which might fairly enough claim these appellations, standing side by side in Britain. I shall call one of them Catastrophism, another Uniformitarianism, the third Evolutionism; and I shall try briefly to sketch the characters of each, that you

may say whether the classification is, or is not, exhaustive.

By Catastrophism I mean any form of geological speculation which, in order to account for the phenomena of geology, supposes the operation of forces different in their nature, or immeasurably different in power, from those which we at present see in action in the universe.

The Mosaic cosmogony is, in this sense, catastrophic, because it assumes the operation of extranatural power. The doctrine of violent upheavals, *deluges*, and cataclysms in general, is catastrophic, so far as it assumes that these were brought about by causes which have now no parallel. There was a time when catastrophism might, pre-eminently, have claimed the title of "British popular geology"; and assuredly it has yet many adherents, and reckons among its supporters some of the most honoured members of this Society.

By Uniformitarianism I mean especially the teaching of Hutton and of Lyell.

That great though incomplete work, "The Theory of the Earth," seems to me to be one of the most remarkable contributions to geology which is recorded in the annals of the science. So far as the not-living world is concerned, uniformitarianism lies there, not only in germ, but in blossom and fruit.

If one asks how it is that Hutton was led to entertain views so far in advance of those prevalent in his time, in some respects; while, in others, they seem almost curiously limited, the answer appears to me to be plain.

Hutton was in advance of the geological speculation of his time, because, in the first place, he had amassed a vast store of knowledge of the facts of geology, gathered by personal observation in travels of considerable extent; and because, in the second place, he was thoroughly trained in the physical and chemical science of his day, and thus possessed, as much as any one in his time could possess it, the knowledge which is requisite for the just interpretation of geological phenomena, and

the habit of thought which fits a man for scientific inquiry.

It is to this thorough scientific training that I ascribe Hutton's steady and persistent refusal to look to other causes than those now in operation for the explanation of geological phenomena.

The internal heat of the earth, the elevation and depression of its crust, its belchings forth of vapours, ashes, and lava, are its activities, in as strict a sense as are warmth and the movements and products of respiration the activities of an animal. The phenomena of the seasons, of the trade winds, of the Gulf-stream, are as much the results of the reaction between these inner activities and outward forces as are the budding of the leaves in spring and their falling in autumn the effects of the interaction between the organisation of a plant and the solar light and heat. And, as the study of the activities of the living being is called its physiology, so are these phenomena the subject-matter of an analogous telluric physiology, to which we sometimes give the name of meteorology, sometimes that of physical geography, sometimes that of geology. Again, the earth has a place in space and in time, and relations to other bodies in both these respects, which constitute its distribution. This subject is usually left to the astronomer; but a knowledge of its broad outlines seems to me to be an essential constituent of the stock of geological ideas.

## CCXIV

All that can be ascertained concerning the structure, succession of conditions, actions, and position in space of the earth, is the matter of fact of its natural history. But, as in biology, there remains the matter of reasoning from these facts to their causes, which is just as much science as the other, and indeed more; and this constitutes geological aetiology.

## CCXV

I suppose that it would be very easy to pick holes in the details of Kant's specula-

tions, whether cosmological, or especially telluric, in their application. But for all that, he seems to me to have been the first person to frame a complete system of geological speculation by founding the doctrine of evolution.

I have said that the three schools of geological speculation which I have termed Catastrophism, Uniformitarianism, and Evolutionism, are commonly supposed to be antagonistic to one another; and I presume it will have become obvious that, in my belief, the last is destined to swallow up the other two. But it is proper to remark that each of the latter has kept alive the tradition of precious truths.

To my mind there appears to be no sort of necessary theoretical antagonism between Catastrophism and Uniformitarianism. On the contrary, it is very conceivable that catastrophes may be part and parcel of uniformity. Let me illustrate my case by analogy. The working of a clock is a model of uniform action; good time-keeping means uniformity of action. But the striking of the clock is essentially a catastrophe; the hammer might be made to blow up a barrel of gunpowder, or turn on a deluge of water; and, by proper arrangement, the clock, instead of marking the hours, might strike at all sorts of irregular periods, never twice alike, in the intervals, force, or number of its blows. Nevertheless, all these irregular, and apparently lawless, catastrophes would be the result of an absolutely uniformitarian action; and we might have two schools of clock-theorists, one studying the hammer and the other the pendulum.

## CCXXVI

Mathematics may be compared to a mill of exquisite workmanship, which grinds your stuff of any degree of fineness; but, nevertheless, what you get out depends upon what you put in; and as the grandest mill in the world will not extract wheat-flour from peascods, so pages of formulae will not get a definite result out of loose data.

## CCXXVII

The motive of the drama of human life is the necessity, laid upon every man who comes into the world, of discovering the mean between self-assertion and self-restraint suited to his character and his circumstances. And the eternally tragic aspect of the drama lies in this: that the problem set before us is one the elements of which can be but imperfectly known, and of which even an approximately right solution rarely presents itself, until that stern critic, aged experience, has been furnished with ample justification for venting his sarcastic humour upon the irreparable blunders we have already made.

## CCXXVIII

That which endures is not one or another association of living forms, but the process of which the cosmos is the product, and of which these are among the transitory expressions. And in the living world, one of the most characteristic features of this cosmic process is the struggle for existence, the competition of each with all, the result of which is the selection, that is to say, the survival of those forms which, on the whole, are best adapted to the conditions which at any period obtain; and which are therefore, in that respect, and only in that respect, the fittest. The acme reached by the cosmic process in the vegetation of the downs is seen in the turf, with its weed and gorse. Under the conditions, they have come out of the struggle victorious; and, by surviving, have proved that they are the fittest to survive.

## CCXXIX

As a natural process, of the same character as the development of a tree from its seed, or of a fowl from its egg, evolution excludes creation and all other kinds of supernatural intervention. As the expression of a fixed order, every stage of which is the effect of causes operating according to definite rules, the

conception of evolution no less excludes that of chance. It is very desirable to remember that evolution is not an explanation of the cosmic process, but merely a generalised statement of the method and results of that process. And, further, that, if there is proof that the cosmic process was set going by any agent, then that agent will be the creator of it and of all its products, although supernatural intervention may remain strictly excluded from its further course.

CCXXX

All plants and animals exhibit the tendency to vary, the causes of which have yet to be ascertained; it is the tendency of the conditions of life, at any given time, while favouring the existence of the variations best adapted to them, to oppose that of the rest and thus to exercise selection; and all living things tend to multiply without limit, while the means of support are limited; the obvious cause of which is the production of offspring more numerous than their progenitors, but with equal expectation of life in the actuarial sense. Without the first tendency there could be no evolution. Without the second, there would be no good reason why one variation should disappear and another take its place; that is to say, there would be no selection. Without the third, the struggle for existence, the agent of the selective process in the state of nature, would vanish.

CCXXXI

The faith which is born of knowledge finds its object in an eternal order, bringing forth ceaseless change, through endless time, in endless space; the manifestations of the cosmic energy alternating between phases of potentiality and phases of explication.

CCXXXII

With all their enormous differences in natural endowment, men agree in one thing, and that is their innate desire to

enjoy the pleasures and escape the pains of life; and, in short, to do nothing but that which it pleases them to do, without the least reference to the welfare of the society into which they are born. That is their inheritance (the reality at the bottom of the doctrine of original sin) from the long series of ancestors, human and semi-human and brutal, in whom the strength of this innate tendency to self-assertion was the condition of victory in the struggle for existence. That is the reason of the *aviditas vita*—the insatiable hunger for enjoyment—of all mankind, which is one of the essential conditions of success in the war with the state of nature outside; and yet the sure agent of the destruction of society if allowed free play within.

CCXXXIII

The check upon this free play of self-assertion, or natural liberty, which is the necessary condition for the origin of human society, is the product of organic necessities of a different kind from those upon which the constitution of the hive depends. One of these is the mutual affection of parent and offspring, intensified by the long infancy of the human species. But the most important is the tendency, so strongly developed in man, to reproduce in himself actions and feelings similar to, or correlated with, those of other men. Man is the most consummate of all mimics in the animal world; none but himself can draw or model; none comes near him in the scope, variety, and exactness of vocal imitation; none is such a master of gesture; while he seems to be impelled thus to imitate for the pure pleasure of it. And there is no such another emotional chameleon. By a purely reflex operation of the mind, we take the hue of passion of those who are about us, or, it may be, the complementary colour. It is not by any conscious "putting one's self in the place" of a joyful or a suffering person that the state of mind we call sympathy usually arises; indeed, it is often contrary to one's

sense of right, and in spite of one's will, that "fellow-feeling makes us wondrous kind," or the reverse. However complete may be the indifference to public opinion, in a cool, intellectual view, of the traditional sage, it has not yet been my fortune to meet with any actual sage who took its hostile manifestations with entire equanimity. Indeed, I doubt if the philosopher lives, or ever has lived, who could know himself to be heartily despised by a street boy without some irritation. And, though one cannot justify Haman for wishing to hang Mordecai on such a very high gibbet, yet, really, the consciousness of the Vizier of Ahasuerus, as he went in and out of the gate, that this obscure Jew had no respect for him, must have been very annoying.

It is needful only to look around us, to see that the greatest restrainer of the anti-social tendencies of men is fear, not of the law, but of the opinion of their fellows. The conventions of honour bind men who break legal, moral, and religious bonds; and, while people endure the extremity of physical pain rather than part with life, shame drives the weakest to suicide.

Every forward step of social progress brings men into closer relations with their fellows, and increases the importance of the pleasures and pains derived from sympathy. We judge the acts of others by our own sympathies, and we judge our own acts by the sympathies of others, every day and all day long, from childhood upwards, until associations, as indissoluble as those of language, are formed between certain acts and the feelings of approbation or disapprobation. It becomes impossible to imagine some acts without disapprobation, or others without approbation of the actor, whether he be one's self or anyone else. We come to think in the acquired dialect of morals. An artificial personality, the "man within," as Adam Smith calls conscience, is built up beside the natural personality. He is the watchman of society, charged to restrain the anti-social tendencies of the natural man within the limits required by social welfare.

CCXXXIV

I have termed this evolution of the feelings out of which the primitive bonds of human society are so largely forged, into the organized and personified sympathy we call conscience, the ethical process. So far as it tends to make any human society more efficient in the struggle for existence with the state of nature, or with other societies, it works in harmonious contrast with the cosmic process. But it is none the less true that since law and morals are restraints upon the struggle for existence between men in society, the ethical process is in opposition to the principle of the cosmic process, and tends to the suppression of the qualities best fitted for success in that struggle.

CCXXXV

Moralists of all ages and of all faiths, attending only to the relations of men towards one another in an ideal society, have agreed upon the "golden rule," "Do as you would be done by." In other words, let sympathy be your guide; put yourself in the place of the man towards whom your action is directed; and do to him what you would like to have done to yourself under the circumstances. However much one may admire the generosity of such a rule of conduct; however confident one may be that average men may be thoroughly depended upon not to carry it out to its full logical consequences; it is nevertheless desirable to recognize the fact that these consequences are incompatible with the existence of a civil state, under any circumstances of this world which have obtained, or, so far as one can see, are likely to come to pass.

For I imagine there can be no doubt that the great desire of every wrongdoer is to escape from the painful consequences of his actions. If I put myself in the place of the man who has robbed me, I find that I am possessed by an exceeding desire not to be fined or imprisoned; if in that of the man who has smitten me on one cheek, I contemplate with satisfaction the absence of

any worse result than the turning of the other cheek for like treatment. Strictly observed, the "golden rule" involves the negation of law by the refusal to put it in motion against law-breakers ; and, as regards the external relations of a polity, it is the refusal to continue the struggle for existence. It can be obeyed, even partially, only under the protection of a society which repudiates it. Without such shelter the followers of the "golden rule" may indulge in hopes of heaven, but they must reckon with the certainty that other people will be masters of the earth.

What would become of the garden if the gardener treated all the weeds and slugs and birds and trespassers as he would like to be treated if he were in their place?

## CCXXXVI

In a large proportion of cases, crime and pauperism have nothing to do with heredity; but are the consequence, partly of circumstances and partly of the possession of qualities, which, under different conditions of life, might have excited esteem and even admiration. It was a shrewd man of the world who, in discussing sewage problems, remarked that dirt is riches in the wrong place; and that sound aphorism has moral applications. The benevolence and open-handed generosity which adorn a rich man may make a pauper of a poor one; the energy and courage to which the successful soldier owes his rise, the cool and daring subtlety to which the great financier owes his fortune, may very easily, under unfavourable conditions, lead their possessors to the gallows, or to the hulks. Moreover, it is fairly probable that the children of a "failure" will receive from their other parent just that little modification of character which makes all the difference. I sometimes wonder whether people who talk so freely about extirpating the unfit, ever dispassionately consider their own history. Surely, one must be very "fit" indeed not to know of an occasion, or perhaps two, in one's life, when it would have

been only too easy to qualify for a place among the "unfit."

## CCXXXVII

In the struggle for the means of enjoyment, the qualities which ensure success are energy, industry, intellectual capacity, tenacity of purpose, and at least as much sympathy as is necessary to make a man understand the feelings of his fellows. Were there none of those artificial arrangements by which fools and knaves are kept at the top of society instead of sinking to their natural place at the bottom, the struggle for the means of enjoyment would ensure a constant circulation of the human units of the social compound, from the bottom to the top and from the top to the bottom. The survivors of the contest, those who continued to form the great bulk of the polity, would not be those "fittest" who got to the very top, but the great body of the moderately "fit," whose numbers and superior propagative power enable them always to swamp the exceptionally endowed minority.

I think it must be obvious to every one that, whether we consider the internal or the external interests of society, it is desirable they should be in the hands of those who are endowed with the largest share of energy, of industry, of intellectual capacity, of tenacity of purpose, while they are not devoid of sympathetic humanity; and, in so far as the struggle for the means of enjoyment tends to place such men in possession of wealth and influence, it is a process which tends to the good of society. But the process, as we have seen, has no real resemblance to that which adapts living beings to current conditions in the state of nature; nor any to the artificial selection of the horticulturist.

## CCXXXVIII

Even should the whole human race be absorbed in one vast polity, within which "absolute political justice" reigns, the struggle for existence with the state of nature outside it, and the tendency to the

return of the struggle within, in consequence of over-multiplication, will remain ; and, unless men's inheritance from the ancestors who fought a good fight in the state of nature, their dose of original sin, is rooted out by some method at present unrevealed, at any rate to disbelievers in supernaturalism, every child born into the world will still bring with him the instinct of unlimited self-assertion. He will have to learn the lesson of self-restraint and renunciation. But the practice of self-restraint and renunciation is not happiness, though it may be something much better.

That man, as a "political animal," is susceptible of a vast amount of improvement, by education, by instruction, and by the application of his intelligence to the adaptation of the conditions of life to his higher needs, I entertain not the slightest doubt. But, so long as he remains liable to error, intellectual or moral ; so long as he is compelled to be perpetually on guard against the cosmic forces, whose ends are not his ends, without and within himself ; so long as he is haunted by inexpugnable memories and hopeless aspirations ; so long as the recognition of his intellectual limitations forces him to acknowledge his incapacity to penetrate the mystery of existence ; the prospect of attaining untroubled happiness, or of a state which can, even remotely, deserve the title of perfection, appears to me to be as misleading an illusion as ever was dangled before the eyes of poor humanity. And there have been many of them.

That which lies before the human race is a constant struggle to maintain and improve, in opposition to the State of Nature, the State of Art of an organised polity ; in which, and by which, man may develop a worthy civilisation, capable of maintaining and constantly improving itself, until the evolution of our globe shall have entered so far upon its downward course that the cosmic process resumes its sway ; and, once more, the State of Nature prevails over the surface of our planet.

## CCXXXIX

From very low forms up to the highest in the animal no less than in the vegetable kingdom - the process of life presents the same appearance of cyclical evolution. Nay, we have but to cast our eyes over the rest of the world and cyclical change presents itself on all sides. It meets us in the water that flows to the sea and return, to the springs ; in the heavenly bodies that wax and wane, go and return to their places ; in the inexorable sequence of the ages of man's life ; in that successive rise, apogee, and fall of dynasties and of States, which is the most prominent topic of civil history.

## CCXL

As no man fording a swift stream can dip his foot twice in the same water, so no man can, with exactness, affirm of any thing in the sensible world that it is. As he utters the words, nay, as he thinks them, the predicate ceases to be applicable, the present has become the past ; the "is" should be "was." And the more we learn of the nature of things, the more evident is it that what we call rest is only unperceived activity ; that seeming peace is silent but strenuous battle. In every part, at every moment, the state of the cosmos is the expression of a transitory adjustment of contending forces ; a scene of strife, in which all the combatants fall in turn. What is true of each part is true of the whole. Natural knowledge tends more and more to the conclusion that "all the choir of heaven and furniture of the earth" are the transitory forms of particles of cosmic substance wending along the road of evolution, from nebulous potentiality, through endless growths of mass and planet and satellite ; through all varieties of matter ; through infinite diversities of life and thought ; possibly, through modes of being of which we neither have a conception, nor are competent to form any, back to the indefinable latency from which they arose. Thus the most obvious attribute of the cosmos is its impermanence.

It assumes the aspect not so much of a permanent entity as of a changeful process in which naught endures save the flow of energy and the rational order which pervades it.

CCXLI

Man, the animal, in fact, has worked his way to the headship of the sentient world, and has become the superb animal which he is in virtue of his success in the struggle for existence. The conditions having been of a certain order, man's organisation has adjusted itself to them better than that of his competitors in the cosmic strife. In the case of mankind, the self-assertion, the unscrupulous seizing upon all that can be grasped, the tenacious holding of all that can be kept, which constitute the essence of the struggle for existence, have answered. For his successful progress, throughout the savage state, man has been largely indebted to those qualities which he shares with the ape and the tiger; his exceptional physical organisation; his cunning, his sociability, his curiosity, and his initiativeness; his ruthless and ferocious destructiveness when his anger is roused by opposition.

But, in proportion as men have passed from anarchy to social organisation, and in proportion as civilisation has grown in worth, these deeply ingrained serviceable qualities have become defects. After the manner of successful persons civilised man would gladly kick down the ladder by which he has climbed. He would be only too pleased to see "the ape and tiger die." But they decline to suit his convenience; and the unwelcome intrusion of these boon companions of his hot youth into the tangled existence of civil life adds pains and griefs, innumerable and immeasurably great, to those which the cosmic process necessarily brings on the mere animal. In fact, civilised man brands all these ape and tiger promptings with the name of sins; he punishes many of the acts which flow from them as crimes; and, in extreme

cases, he does his best to put an end to the survival of the fittest of former days by axe and rope.

CCXII

In Hindostan, as in Ionia, a period of relatively high and tolerably stable civilisation had succeeded long ages of semi-barbarism and struggle. Out of wealth and security had come leisure and refinement, and, close at their heels, had followed the malady of thought. To the struggle for bare existence, which never ends, though it may be alleviated and partially disguised for a fortunate few, succeeded the struggle to make existence intelligible and to bring the order of things into harmony with the moral sense of man, which also never ends, but, for the thinking few, becomes keener with every increase of knowledge and with every step towards the realisation of a worthy ideal of life.

Two thousand five hundred years ago the value of civilisation was as apparent as it is now; then, as now, it was obvious that only in the garden of an orderly polity can the finest fruits humanity is capable of bearing be produced. But it had also become evident that the blessings of culture were not unmixed. The garden was apt to turn into a hothouse. The stimulation of the senses, the pampering of the emotions, endlessly multiplied the sources of pleasure. The constant widening of the intellectual field indefinitely extended the range of that especially human faculty of looking before and after, which adds to the fleeting present those old and new worlds of the past and the future, wherein men dwell the more the higher their culture. But that very sharpening of the sense and that subtle refinement of emotion, which brought such a wealth of pleasures, were fatally attended by a proportional enlargement of the capacity for suffering; and the divine faculty of imagination, while it created new heavens and new earths, provided them with the corresponding hells of futile regret for the past and morbid anxiety for the future.

## CCXLIII

One of the oldest and most important elements in such systems is the conception of justice. Society is impossible unless those who are associated agree to observe certain rules of conduct towards one another ; its stability depends on the steadiness with which they abide by that agreement ; and, so far as they waver, that mutual trust which is the bond of society is weakened or destroyed. Wolves could not hunt in packs except for the real, though unexpressed, understanding that they should not attack one another during the chase. The most rudimentary polity is a pack of men living under the like tacit, or expressed, understanding ; and having made the very important advance upon wolf society that they agree to use the force of the whole body against individuals who violate it and in favour of those who observe it. This observance of a common understanding, with the consequent distribution of punishments and rewards according to accepted rules, received the name of justice, while the contrary was called injustice. Early ethics did not take much note of the animus of the violator of the rules. But civilisation could not advance far without the establishment of a capital distinction between the case of involuntary and that of wilful misdeed ; between a merely wrong action and a guilty one.

And, with increasing refinement of moral appreciation, the problem of desert, which arises out of this distinction, acquired more and more theoretical and practical importance. If life must be given for life, yet it was recognised that the unintentional slayer did not altogether deserve death ; and, by a sort of compromise between the public and the private conception of justice, a sanctuary was provided in which he might take refuge from the avenger of blood.

The idea of justice thus underwent a gradual sublimation from punishment and reward according to acts, to punishment and reward according to desert ; or, in

other words, according to motive. Righteousness, that is, action from right motive, not only became synonymous with justice, but the positive constituent of innocence and the very heart of goodness.

## CCXLIV

Everyday experience familiarises us with the facts which are grouped under the name of heredity. Everyone of us bears upon him obvious marks of his parentage, perhaps of remoter relationships. More particularly, the sum of tendencies to act in a certain way, which we call "character," is often to be traced through a long series of progenitors and collaterals. So we may justly say that this "character"

this moral and intellectual essence of a man does veritably pass over from one fleshly tabernacle to another, and does really transmigrate from generation to generation. In the new-born infant the character of the stock lies latent, and the Ego is little more than a bundle of potentialities. But, very early, these become actualities ; from childhood to age they manifest themselves in dulness or brightness, weakness or strength, viciousness or uprightness ; and with each feature modified by confluence with another character, if by nothing else, the character passes on to its incarnation in new bodies.

## CCXLV

Only one rule of conduct could be based upon the remarkable theory of which I have endeavoured to give a reasoned outline. It was folly to continue to exist when an overplus of pain was certain ; and the probabilities in favour of the increase of misery with the prolongation of existence, were so overwhelming. Slaying the body only made matters worse ; there was nothing for it but to slay the soul by the voluntary arrest of all its activities. Property, social ties, family affections, common companionship, must be abandoned ; the most natural appetites, even that for food, must be suppressed, or at least minimised ;

until all that remained of a man was the impassive, extenuated, mendicant monk, self-hypnotised into cataleptic trances, which the deluded mystic took for foretastes of the final union with Brahma.

## CCXLVI

If the cosmos is the effect of an immanent, omnipotent, and infinitely beneficent cause, the existence in it of real evil, still less of necessarily inherent evil, is plainly inadmissible. Yet the universal experience of mankind testifies then, as now, that, whether we look within us or without us, evil stares us in the face on all sides; that if anything is real, pain and sorrow and wrong are realities.

It would be a new thing in history if *pro* *pro* *pro* philosophers were daunted by the factions opposition of experience; and the Stoics were the last men to allow themselves to be beaten by mere facts. "Give me a doctrine and I will find the reasons for it," said Chrysippus. So they perfected, if they did not invent, that ingenious and plausible form of pleading, the Theodicy; for the purpose of showing firstly, that there is no such thing as evil; secondly, that if there is, it is the necessary correlate of good; and, moreover, that it is either due to our own fault, or inflicted for our benefit.

## CCXLVII

Unfortunately, it is much easier to shut one's eyes to good than to evil. Pain and sorrow knock at our doors more loudly than pleasure and happiness; and the prints of their heavy footsteps are less easily effaced.

## CCXLVIII

In the language of the Stoas, "Nature" was a word of many meanings. There was the "Nature" of the cosmos, and the "Nature" of man. In the latter, the animal "nature," which man shares with a moiety of the living part of the cosmos, was distinguished from a higher "nature." Even in this higher nature there were grades of rank. The logical faculty is an

instrument which may be turned to account for any purpose. The passions and the emotions are so closely tied to the lower nature that they may be considered to be pathological, rather than normal, phenomena. The one supreme, hegemonic, faculty, which constitutes the essential "nature" of man, is most nearly represented by that which, in the language of a later philosophy, has been called the pure reason. It is this "nature" which holds up the ideal of the supreme good and demands absolute submission of the will to its behests. It is this which commands all men to love one another, to return good for evil, to regard one another as fellow-citizens of one great state. Indeed, seeing that the progress towards perfection of a civilised state, or polity, depends on the obedience of its members to these commands, the Stoics sometimes termed the pure reason the "political" nature. Unfortunately, the sense of the adjective has undergone so much modification that the application of it to that which commands the sacrifice of self to the common good would now sound almost grotesque.

## CCXLIX

The majority of us, I apprehend, profess neither pessimism nor optimism. We hold that the world is neither so good, nor so bad, as it conceivably might be; and, as most of us have reason, now and again, to discover that it can be. Those who have failed to experience the joys that make life worth living are, probably, in as small a minority as those who have never known the griefs that rob existence of its savour and turn its richest fruits into mere dust and ashes.

## CCL

There is another fallacy which appears to me to pervade the so-called "ethics of evolution." It is the notion that because, on the whole, animals and plants have advanced in perfection of organisation by means of the struggle for existence and the consequent "survival of the fittest";

therefore men in society, men as ethical beings, must look to the same process to help them towards perfection. I suspect that this fallacy has arisen out of the unfortunate ambiguity of the phrase "survival of the fittest." "Fittest" has a connotation of "best"; and about "best" there hangs a moral flavour. In cosmic nature, however, what is "fittest" depends upon the conditions. Long since, I ventured to point out that if our hemisphere were to cool again, the survival of the fittest might bring about, in the vegetable kingdom, a population of more and more stunted and humbler and humbler organisms, until the "fittest" that survived might be nothing but lichens, diatoms, and such microscopic organisms as those which give red snow its colour; while, if it became hotter, the pleasant valleys of the Thames and Isis might be uninhabitable by any animated beings save those that flourish in a tropical jungle. They, as the fittest, the best adapted to the changed conditions, would survive.

## CCLI

The practice of that which is ethically best—what we call goodness or virtue— involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside, or treading down, all competitors, it requires that the individual shall not merely respect, but shall help his fellows; its influence is directed, not so much to the survival of the fittest, as to the fitting of as many as possible to survive. It repudiates the gladiatorial theory of existence. It demands that each man who enters into the enjoyment of the advantages of a polity shall be mindful of his debt to those who have laboriously constructed it; and shall take heed that no act of his weakens the fabric in which he has been permitted to live. Laws and moral precepts are directed to the end of curbing the cosmic process

and reminding the individual of his duty to the community, to the protection and influence of which he owes, if not existence itself, at least the life of something better than a brutal savage.

## CCLII

The theory of evolution encourages no millennial anticipations. If, for millions of years, our globe has taken the upward road, yet, some time, the summit will be reached and the downward route will be commenced. The most daring imagination will hardly venture upon the suggestion that the power and the intelligence of man can ever arrest the procession of the great year.

Moreover, the cosmic nature born within us and, to a large extent, necessary for our maintenance, is the outcome of millions of years of severe training, and it would be folly to imagine that a few centuries will suffice to subdue its masterfulness to purely ethical ends. Ethical nature may count upon having to reckon with a tenacious and powerful enemy as long as the world lasts. But, on the other hand, I see no limit to the extent to which intelligence and will, guided by sound principles of investigation, and organised in common effort, may modify the conditions of existence, for a period longer than that now covered by history. And much may be done to change the nature of man himself. The intelligence which has converted the brother of the wolf into the faithful guardian of the flock ought to be able to do something towards curbing the instincts of savagery in civilised men.

But if we may permit ourselves a larger hope of abatement of the essential evil of the world than was possible to those who, in the infancy of exact knowledge, faced the problem of existence more than a score of centuries ago, I deem it an essential condition of the realisation of that hope that we should cast aside the notion that the escape from pain and sorrow is the proper object of life.

## CCLIII

We have long since emerged from the heroic childhood of our race, when good and evil could be met with the same "frolic welcome"; the attempts to escape from evil, whether Indian or Greek, have ended in flight from the battle-field; it remains to us to throw aside the youthful overconfidence and the no less youthful discouragement of nonage. We are grown men, and must play the man

strong in will

To strive, to seek, to find, and not to yield,  
cherishing the good that falls in our way,  
and bearing the evil, in and around us,  
with stout hearts set on diminishing it. So  
far, we all may strive in one faith towards  
one hope:

It may be that the gulfs will wash us down,  
It may be we shall touch the Happy Isles,  
... but something ere the end,  
Some work of noble note may yet be done.

## CCLIV

I do not suppose that I am exceptionally endowed because I have all my life enjoyed a keen perception of the beauty offered us by nature and by art. Now physical science may and probably will, some day, enable our posterity to set forth the exact physical concomitants and conditions of the strange rapture of beauty. But if ever that day arrives, the rapture will remain, just as it is now, outside and beyond the physical world; and, even in the mental world, something superadded to mere sensation. I do not wish to crow unduly over my humble cousin the orang, but in the aesthetic province, as in that of the intellect, I am afraid he is nowhere. I doubt not he would detect a fruit amidst a wilderness of leaves where I could see nothing; but I am tolerably confident that he has never been awestruck, as I have been, by the dim religious gloom, as of a temple devoted to the earth-gods, of the tropical forests which he inhabits. Yet I doubt not that our poor long-armed and short-legged friend, as he sits meditatively munching his durian fruit,

has something behind that sad Socratic face of his which is utterly "beyond the bounds of physical science." Physical science may know all about his clutching the fruit and munching it and digesting it, and how the physical titillation of his palate is transmitted to some microscopic cells of the gray matter of his brain. But the feelings of sweetness and of satisfaction which, for a moment, hang out their signal lights in his melancholy eyes, are as utterly outside the bounds of physics as is the "fine frenzy" of a human rhapsodist.

## CCLV

When I was a mere boy, with a perverse tendency to think when I ought to have been playing, my mind was greatly exercised by this formidable problem, What would become of things if they lost their qualities? As the qualities had no objective existence, and the thing without qualities was nothing, the solid world seemed whittled away—to my great horror. As I grew older, and learned to use the terms "matter" and "force," the boyish problem was revived, *mutato nomine*. On the one hand, the notion of matter without force seemed to resolve the world into a set of geometrical ghosts, too dead even to jabber. On the other hand, Boscovich's hypothesis, by which matter was resolved into centres of force, was very attractive. But when one tried to think it out, what in the world became of force considered as an objective entity? Force, even the most materialistic of philosophers will agree with the most idealistic, is nothing but a name for the cause of motion. And if, with Boscovich, I resolved things into centres of force, then matter vanished altogether and left immaterial entities in its place. One might as well frankly accept Idealism and have done with it.

## CCLVI

Tolerably early in life I discovered that one of the unpardonable sins, in the eyes of most people, is for a man to presume to go about unlabelled. The world

regards such a person as the police do an unmuzzled dog, not under proper control. I could find no label that would suit me, so, in my desire to range myself and be respectable, I invented one; and, as the chief thing I was sure of was that I did not know a great many things that the -ists and the -ites about me professed to be familiar with, I called myself an Agnostic. Surely no denomination could be more modest or more appropriate; and I cannot imagine why I should be every now and then haled out of my refuge and declared sometimes to be a Materialist, sometimes an Atheist, sometimes a Positivist, and sometimes, alas and alack, a cowardly or reactionary Obscurantist.

## CCLVII

Lastly, with respect to the old riddle of the freedom of the will. In the only sense in which the word freedom is intelligible to me—that is to say, the absence of any restraint upon doing what one likes within certain limits physical science certainly gives no more ground for doubting it than the common sense of mankind does. And if physical science, in strengthening our belief in the universality of causation and abolishing chance as an absurdity, leads to the conclusion of determinism, it does no more than follow the track of consistent and logical thinkers in philosophy and in theology, before it existed or was thought of. Whoever accepts the universality of the law of causation as a dogma of philosophy, denies the existence of uncaused phenomena. And the essence of that which is improperly called the freewill doctrine is that occasionally, at any rate, human volition is self-caused, that is to say, not caused at all; for to cause oneself one must have antecedent oneself—which is, to say the least of it, difficult to imagine.

## CCLVIII

If the diseases of society consist in the weakness of its faith in the existence of the God of the theologians, in a future

state, and in uncaused volitions, the indication, as the doctors say, is to suppress Theology and Philosophy, whose bickerings about things of which they know nothing have been the prime cause and continual sustenance of that evil scepticism which is the Nemesis of meddling with the unknowable.

Cinderella is modestly conscious of her ignorance of these high matters. She lights the fire, sweeps the house, and provides the dinner; and is rewarded by being told that she is a base creature, devoted to low and material interests. But in her garret she has fairy visions out of the ken of the pair of shrews who are quarrelling downstairs. She sees the order which pervades the seeming disorder of the world; the great drama of evolution, with its full share of pity and terror, but also with abundant goodness and beauty, unrolls itself before her eyes; and she learns, in her heart of hearts, the lesson, that the foundation of morality is to have done, once and for all, with lying; to give up pretending to believe that for which there is no evidence, and repeating unintelligible propositions about things beyond the possibilities of knowledge.

She knows that the safety of morality lies neither in the adoption of this or that philosophical speculation, or this or that theological creed, but in a real and living belief in that fixed order of nature which sends social disorganisation upon the track of immorality, as surely as it sends physical disease after physical trespasses. And of that firm and lively faith it is her high mission to be the priestess.

## CCLIX

The first act of a new-born child is to draw a deep breath. In fact, it will never draw a deeper, inasmuch as the passages and chambers of the lungs, once distended with air, do not empty themselves again; it is only a fraction of their contents which passes in and out with the flow and the ebb of the respiratory tide. Mechanically,

this act of drawing breath, or inspiration, is of the same nature as that by which the handles of a bellows are separated, in order to fill the bellows with air; and, in like manner, it involves that expenditure of energy which we call exertion, or work, or labour. It is, therefore, no mere metaphor to say that man is destined to a life of toil: the work of respiration which began with his first breath ends only with his last; nor does one born in the purple get off with a lighter task than the child who first sees light under a hedge.

How is it that the new-born infant is enabled to perform this first instalment of the sentence of lifelong labour which no man may escape? Whatever else a child may be, in respect of this particular question it is a complicated piece of mechanism, built up out of materials supplied by its mother; and in the course of such building-up, provided with a set of motors the muscles. Each of these muscles contains a stock of substance capable of yielding energy under certain conditions, one of which is a change of state in the nerve-fibres connected with it. The powder in a loaded gun is such another stock of substance capable of yielding energy in consequence of a change of

state in the mechanism of the lock, which intervenes between the finger of the man who pulls the trigger and the cartridge. If that change is brought about, the potential energy of the powder passes suddenly into actual energy, and does the work of propelling the bullet. The powder, therefore, may be appropriately called *work-stuff*, not only because it is stuff which is easily made to yield work in the physical sense, but because a good deal of work in the economical sense has contributed to its production. Labour was necessary to collect, transport, and purify the raw sulphur and saltpetre; to cut wood and convert it into powdered charcoal; to mix these ingredients in the right proportions; to give the mixture the proper grain, and so on. The powder once formed part of the stock, or capital, of a powder-maker; and it is not only certain natural bodies

which are collected and stored in the gunpowder, but the labour bestowed on the operations mentioned may be figuratively said to be incorporated in it.

## CCLX

In principle, the work-stuff stored in the muscles of the new-born child is comparable to that stored in the gun-barrel. The infant is launched into altogether new surroundings; and these operate through the mechanism of the nervous machinery, with the result that the potential energy of some of the work-stuff in the muscles which bring about inspiration is suddenly converted into actual energy; and this, operating through the mechanism of the respiratory apparatus, gives rise to an act of inspiration. As the bullet is propelled by the "going off" of the powder, as it might be said that the ribs are raised and the midriff depressed by the "going off" of certain portions of muscular work-stuff. This work-stuff is part of a stock or capital of that commodity stored up in the child's organism before birth, at the expense of the mother; and the mother has made good her expenditure by drawing upon the capital of food-stuffs which furnished her daily maintenance.

Under these circumstances, it does not appear to me to be open to doubt that the primary act of outward labour in the series which necessarily accompany the life of man is dependent upon the pre-existence of a stock of material which is not only of use to him, but which is disposed in such a manner as to be utilisable with facility. And I further imagine that the propriety of the application of the term "capital" to this stock of useful substance cannot be justly called in question; inasmuch as it is easy to prove that the essential constituents of the work-stuff accumulated in the child's muscles have merely been transferred from the store of food-stuffs, which everybody admits to be capital, by means of the maternal organism to that of the child, in which they are again deposited to await use. Every subsequent act of labour, in like manner, involves an equivalent con-

sumption of the child's store of work-stuff —its vital capital ; and one of the main objects of the process of breathing is to get rid of some of the effects of that consumption. It follows, then, that, even if no other than the respiratory work were going on in the organism, the capital of work-stuff, which the child brought with it into the world, must sooner or later be used up, and the movements of breathing must come to an end ; just as the see-saw of a piston of a steam-engine stops when the coal in the fireplace has burnt away.

Milk, however, is a stock of materials which essentially consists of savings from the food-stuffs supplied to the mother. And these savings are in such a physical and chemical condition that the organism of the child can easily convert them into work-stuff. That is to say, by borrowing directly from the vital capital of the mother, indirectly from the store in the natural bodies accessible to her, it can make good the loss of its own. The operation of borrowing, however, involves further work ; that is, the labour of sucking, which is a mechanical operation of much the same nature as breathing. The child thus pays for the capital it borrows in labour ; but as the value in work-stuff of the milk obtained is very far greater than the value of that labour, estimated by the consumption of work-stuff it involves, the operation yields a large profit to the infant. The overplus of food-stuff suffices to increase the child's capital of work-stuff ; and to supply not only the materials for the enlargement of the "buildings and machinery" which is expressed by the child's growth, but also the energy required to put all these materials together, and to carry them to their proper places. Thus, throughout the years of infancy, and so long thereafter as the youth or man is not thrown upon his own resources, he lives by consuming the vital capital provided by others.

## CCLXI

Let us now suppose the child come to man's estate in the condition of a wander-

ing savage, dependent for his food upon what he can pick up or catch, after the fashion of the Australian aborigines. It is plain that the place of mother, as the supplier of vital capital, is now taken by the fruits, seeds, and roots of plants and by various kinds of animals. . . . The savage, like the child, borrows the capital he needs, and, at any rate, intentionally, does nothing towards repayment ; it would plainly be an improper use of the word "produce" to say that his labour in hunting for the roots, or the fruits, or the eggs, or the grubs and snakes, which he finds and eats, "produces" or contributes to "produce" them. The same thing is true of more advanced tribes, who are still merely hunters, such as the Esquimaux. They may expend more labour and skill, but it is spent in destruction.

## CCLXII

When we find set forth as an "absolute" truth the statement that the essential factors in economic production are land, capital and labour —when this is offered as an axiom whence all sorts of other important truths may be deduced it is needful to remember that the assertion is true only with a qualification. Undoubtedly "vital capital" is essential ; for, as we have seen, no human work can be done unless it exists, not even that internal work of the body which is necessary to passive life. But, with respect to labour (that is human labour), I hope to have left no doubt on the reader's mind that, in regard to production, the importance of human labour may be so small as to be almost a vanishing quantity.

## CCLXIII

The one thing needful for economic production is the green plant, as the sole producer of vital capital from natural inorganic bodies. Men might exist without labour (in the ordinary sense) and without land ; without plants they must inevitably perish.

## CCLXIV

Since no amount of labour can produce an ounce of food-stuff beyond the maximum producible by a limited number of plants, under the most favourable circumstances in regard to those conditions which are not affected by labour, it follows that, if the number of men to be fed increases indefinitely, a time must come when some will have to starve. That is the essence of the so-called Malthusian doctrine; and it is a truth which, to my mind, is as plain as the general proposition that a quantity which constantly increases will, some time or other, exceed any greater quantity the amount of which is fixed.

## CCLXV

“Virtually” is apt to cover more intellectual sins than “charity” does moral delicts.

## CCLXVI

The notion that the value of a thing bears any necessary relation to the amount of labour (average or otherwise) bestowed upon it, is a fallacy which needs no further refutation than it has already received. The average amount of labour bestowed upon warming-pans confers no value upon them in the eyes of a Gold-Coast negro; nor would an Esquimaux give a slice of blubber for the most elaborate of ice-machines.

## CCLXVII

Who has ever imagined that wealth which, in the hands of an employer, is capital, ceases to be capital if it is in the hands of a labourer? Suppose a workman to be paid thirty shillings on Saturday evening for six days' labour, that thirty shillings comes out of the employer's capital, and receives the name of “wages” simply because it is exchanged for labour. In the workman's pocket, as he goes home, it is a part of his capital, in exactly the same sense as, half an hour before, it was part of the employer's capital; he is a capitalist just as much as if he were a Rothschild.

## CCLXVIII

I think it may be not too much to say that of all the political delusions which are current in this queer world, the very stupidest are those which assume that labour and capital are necessarily antagonistic; that all capital is produced by labour and therefore, by natural right, is the property of the labourer; that the possessor of capital is a robber who preys on the workman and appropriates to himself that which he has had no share in producing.

On the contrary, capital and labour are necessarily close allies; capital is never a product of human labour alone; it exists apart from human labour; it is the necessary antecedent of labour; and it furnishes the materials on which labour is employed. The only indispensable form of capital—vital capital cannot be produced by human labour. All that man can do is to favour its formation by the real producers. There is no intrinsic relation between the amount of labour bestowed on an article and its value in exchange. The claim of labour to the total result of operations which are rendered possible only by capital is simply an *a priori* iniquity.

## CCLXIX

The vast and varied procession of events, which we call Nature, affords a sublime spectacle and an inexhaustible wealth of attractive problems to the speculative observer. If we confine our attention to that aspect which engages the attention of the intellect, nature appears a beautiful and harmonious whole, the incarnation of a faultless logical process, from certain premisses in the past to an inevitable conclusion in the future. But if it be regarded from a less elevated, though more human, point of view; if our moral sympathies are allowed to influence our judgment, and we permit ourselves to criticise our great mother as we criticise one another; then our verdict, at least so far as sentient nature is concerned, can hardly be so favourable.

In sober truth, to those who have made a study of the phenomena of life as they are exhibited by the higher forms of the animal world, the optimistic dogma, that this is the best of all possible worlds, will seem little better than a libel upon possibility. It is really only another instance to be added to the many extant, of the audacity of *a priori* speculators who, having created God in their own image, find no difficulty in assuming that the Almighty must have been actuated by the same motives as themselves. They are quite sure that, had any other course been practicable, He would no more have made infinite suffering a necessary ingredient of His handiwork than a respectable philosopher would have done the like.

But even the modified optimism of the time-honoured thesis of physico-theology, that the sentient world is, on the whole, regulated by principles of benevolence, does but ill stand the test of impartial confrontation with the facts of the case. No doubt it is quite true that sentient nature affords hosts of examples of subtle contrivances directed towards the production of pleasure or the avoidance of pain ; and it may be proper to say that these are evidences of benevolence. But if so, why is it not equally proper to say of the equally numerous arrangements, the no less necessary result of which is the production of pain, that they are evidences of malevolence ?

If a vast amount of that which, in a piece of human workmanship, we should call skill, is visible in those parts of the organisation of a deer to which it owes its ability to escape from beasts of prey, there is at least equal skill displayed in that bodily mechanism of the wolf which enables him to track, and sooner or later to bring down, the deer. Viewed under the dry light of science, deer and wolf are alike admirable ; and, if both were non-sentient automata, there would be nothing to qualify our admiration of the action of the one on the other. But the fact that the deer suffers, while the wolf inflicts suffer-

ing, engages our moral sympathies. We should call men like the deer innocent and good, men such as the wolf malignant and bad ; we should call those who defended the deer and aided him to escape brave and compassionate, and those who helped the wolf in his bloody work base and cruel. Surely, if we transfer these judgments to nature outside the world of man at all, we must do so impartially. In that case, the goodness of the right hand which helps the deer, and wickedness of the left hand which eggs on the wolf, will neutralise one another : and the course of nature will appear to be neither moral nor immoral, but non-moral.

This conclusion is thrust upon us by analogous facts in every part of the sentient world ; yet, inasmuch as it not only jars upon prevalent prejudices, but arouses the natural dislike to that which is painful, much ingenuity has been exercised in devising an escape from it.

## CCLXX

From the point of view of the moralist the animal world is on about the same level as a gladiator's show. The creatures are fairly well treated, and set to fight -whereby the strongest, the swiftest, and the cunningest live to fight another day. The spectator has no need to turn his thumb down, as no quarter is given. He must admit that the skill and training displayed are wonderful. But he must shut his eyes if he would not see that more or less enduring suffering is the meed of both vanquished and victor. And since the great game is going on in every corner of the world, thousands of times a minute ; since, were our ears sharp enough, we need not descend to the gates of hell to hear -

sospiri, pianti, ed alti guai.

. . . . .  
Voci alte e fioche, e suon di man con elle

—it seems to follow that, if this world is governed by benevolence, it must be a different sort of benevolence from that of John Howard.

## CCLXXI

This may not be the best of all possible worlds, but to say that it is the worst is mere petulant nonsense. A worn-out voluptuary may find nothing good under the sun, or a vain and inexperienced youth, who cannot get the moon he cries for, may vent his irritation in pessimistic moanings; but there can be no doubt in the mind of any reasonable person that mankind could, would, and in fact do, get on fairly well with vastly less happiness and far more misery than find their way into the lives of nine people out of ten. If each and all of us had been visited by an attack of neuralgia, or of extreme mental depression, for one hour in every twenty-four - a supposition which many tolerably vigorous people know, to their cost, is not extravagant - the burden of life would have been immensely increased without much practical hindrance to its general course. Men with any manhood in them find life quite worth living under worse conditions than these.

## CCLXXII

There is another sufficiently obvious fact, which renders the hypothesis that the course of sentient nature is dictated by malevolence quite untenable. A vast multitude of pleasures, and these among the purest and the best, are superfluities, bits of good which are to all appearance unnecessary as inducements to live, and are, so to speak, thrown into the bargain of life. To those who experience them, few delights can be more entrancing than such as are afforded by natural beauty, or by the arts, and especially by music; but they are products of, rather than factors in, evolution, and it is probable that they are known, in any considerable degree, to but a very small proportion of mankind.

## CCLXXIII

The conclusion of the whole matter seems to be that, if Ormuzd has not had his way in this world, neither has Ahriman

Pessimism is as little consonant with the facts of sentient existence as optimism. If we desire to represent the course of nature in terms of human thought, and assume that it was intended to be that which it is, we must say that its governing principle is intellectual and not moral; that it is a materialised logical process, accompanied by pleasures and pains, the incidence of which, in the majority of cases, has not the slightest reference to moral desert. That the rain falls alike upon the just and the unjust, and that those upon whom the Tower of Siloam fell were no worse than their neighbours, seem to be Oriental modes of expressing the same conclusion.

## CCLXXIV

In the strict sense of the word "nature," it denotes the sum of the phenomenal world, of that which has been, and is, and will be; and society, like art, is therefore a part of nature. But it is convenient to distinguish those parts of nature in which man plays the part of immediate cause, as something apart; and therefore, society, like art, is usefully to be considered as distinct from nature. It is the more desirable, and even necessary, to make this distinction, since society differs from nature in having a definite moral object; whence it comes about that the course shaped by the ethical man - the member of society or citizen necessarily runs counter to that which the non-ethical man - the primitive savage, or man as a mere member of the animal kingdom - tends to adopt. The latter fights out the struggle for existence to the bitter end, like any other animal; the former devotes his best energies to the object of setting limits to the struggle.

## CCLXXV

The first men who substituted the state of mutual peace for that of mutual war, whatever the motive which impelled them to take that step, created society. But, in establishing peace, they obviously put a limit upon the struggle for existence. Between the members of that society, at

any rate, it was not to be pursued *a outrance*. And of all the successive shapes which society has taken, that most nearly approaches perfection in which the war of individual against individual is most strictly limited. The primitive savage, tutored by Istar, appropriated whatever took his fancy, and killed whosoever opposed him, if he could. On the contrary, the ideal of the ethical man is to limit his freedom of action to a sphere in which he does not interfere with the freedom of others; he seeks the common weal as much as his own; and, indeed, as an essential part of his own welfare. Peace is both end and means with him; and he finds his life on a more or less complete self-restraint, which is the negation of the unlimited struggle for existence. He tries to escape from his place in the animal kingdom, founded on the free development of the principle of non-moral evolution, and to establish a kingdom of Man, governed upon the principle of moral evolution. For society not only has a moral end, but in its perfection, social life, is embodied morality.

## CLXXVI

I was once talking with a very eminent physician<sup>1</sup> about the *vis medicatrix naturae*. "Stuff!" said he; "nine times out of ten nature does not want to cure the man: she wants to put him in his coffin."

## CLXXVII

Let us look at home. For seventy years peace and industry have had their way among us with less interruption and under more favourable conditions than in any other country on the face of the earth. The wealth of Crœsus was nothing to that which we have accumulated, and our prosperity has filled the world with envy. But Nemesis did not forget Crœsus: has she forgotten us?

## CLXXVIII

Judged by an ethical standard, nothing can be less satisfactory than the position

<sup>1</sup> The late Sir W. Gull.

in which we find ourselves. In a real, though incomplete, degree we have attained the condition of peace which is the main object of social organisation; and for argument's sake, it may be assumed that we desire nothing but that which is in itself innocent and praiseworthy—namely, the enjoyment of the fruits of honest industry. And lo! in spite of ourselves, we are in reality engaged in an intercine struggle for existence with our presumably no less peaceful and well-meaning neighbours. We seek peace and we do not ensue it. The moral nature in us asks for no more than is compatible with the general good; the non-moral nature proclaims and acts upon that fine old Scottish family motto, "Thou shalt starve ere I want." Let us be under no illusions, then. So long as unlimited multiplication goes on, no social organisation which has ever been devised, or is likely to be devised, no fiddle-faddling with the distribution of wealth, will deliver society from the tendency to be destroyed by the reproduction within itself, in its intensest form, of that struggle for existence the limitation of which is the object of society. And, however shocking to the moral sense this eternal competition of man against man and of nation against nation may be; however revolting may be the accumulation of misery at the negative pole of society, in contrast with that of monstrous wealth at the positive pole; this state of things must abide, and grow continually worse, so long as Istar holds her way unchecked. It is the true riddle of the Sphinx; and every nation which does not solve it will sooner or later be devoured by the monster itself has generated.

## CLXXIX

It would be folly to entertain any ulterior feeling towards those neighbours and rivals who, like ourselves, are slaves of Istar; but if somebody is to be starved, the modern world has no Oracle of Delphi to which the nations can appeal for an indication of the victim. It is open to us

to try our fortune ; and if we avoid impending fate, there will be a certain ground for believing that we are the right people to escape. *Secundus judicat orbis.*

To this end, it is well to look into the necessary conditions of our salvation by works. They are two, one plain to all the world and hardly heeding insistence ; the other seemingly not so plain, since too often it has been theoretically and practically left out of sight. The obvious condition is that our produce shall be better than that of others. There is only one reason why our goods should be preferred to those of our rivals our customers must find them better at the price. That means that we must use more knowledge, skill, and industry in producing them, without a proportionate increase in the cost of production ; and as the price of labour constitutes a large element in that cost, the rate of wages must be restricted within certain limits. It is perfectly true that cheap production and cheap labour are by no means synonymous ; but it is also true that wages cannot increase beyond a certain proportion without destroying cheapness. Cheapness, then, with, as part and parcel of cheapness, a moderate price of labour, is essential to our success as competitors in the markets of the world.

The second condition is really quite as plausibly indispensable as the first, if one thinks seriously about the matter. It is social stability. Society is stable when the wants of its members obtain as much satisfaction as, life being what it is, common sense and experience show may be reasonably expected. Mankind, in general, care very little for forms of government or ideal considerations of any sort ; and nothing really stirs the great multitude to break with custom and incur the manifest perils of revolt except the belief that misery in this world, or damnation in the next, or both, are threatened by the continuance of the state of things in which they have been brought up. But when they do attain that conviction, society becomes as unstable as a package of dyna-

mite, and a very small matter will produce the explosion which sends it back to the chaos of savagery.

## CCLXXX

Intelligence, knowledge, and skill are undoubtedly conditions of success ; but of what avail are they likely to be unless they are backed up by honesty, energy, good-will and all the physical and moral faculties that go to the making of manhood, and unless they are stimulated by hope of such reward as men may fairly look to ? And what dweller in the slough of want, dwarfed in body and soul, demoralised, hopeless, can reasonably be expected to possess these qualities ?

## CCXXXI

I am as strongly convinced as the most pronounced individualist can be, that it is desirable that every man should be free to act in every way which does not limit the corresponding freedom of his fellowman. But I fail to connect that great induction of political science with the practical corollary which is frequently drawn from it : that the State - that is, the people in their corporate capacity has no business to meddle with anything but the administration of justice and external defence. It appears to me that the amount of freedom which incorporate society may fitly leave to its members is not a fixed quantity, to be determined *a priori* by deduction from the fiction called "natural rights" ; but that it must be determined by, and vary with, circumstances. I conceive it to be demonstrable that the higher and the more complex the organisation of the social body, the more closely is the life of each member bound up with that of the whole ; and the larger becomes the category of acts which cease to be merely self-regarding, and which interfere with the freedom of others more or less seriously.

If a squatter, living ten miles away from any neighbour, chooses to burn his house down to get rid of vermin, there may be no necessity (in the absence of insurance

offices) that the law should interfere with his freedom of action; his act can hurt nobody but himself. But, if the dweller in a street chooses to do the same thing, the State very properly makes such a proceeding a crime, and punishes it as such. He does meddle with his neighbour's freedom, and that seriously. So it might, perhaps, be a tenable doctrine, that it would be needless, and even tyrannous, to make education compulsory in a sparse agricultural population, living in abundance on the produce of its own soil; but, in a densely populated manufacturing country, struggling for existence with competitors, every ignorant person tends to become a burden upon, and, so far, an infringer of the liberty of, his fellows, and an obstacle to their success. Under such circumstances an educational rate is, in fact, a war tax, levied for purposes of defence.

## CCLXXXII

That State action always has been more or less misdirected, and always will be so, is, I believe, perfectly true. But I am not aware that it is more true of the action of men in their corporate capacity than it is of the doings of individuals. The wisest and most dispassionate man in existence, merely wishing to go from one stile in a field to the opposite, will not walk quite straight—he is always going a little wrong, and always correcting himself; and I can only congratulate the individualist who is able to say that his general course of life has been of a less undulatory character. To abolish State action, because its direction is never more than approximately correct, appears to me to be much the same thing as abolishing the man at the wheel altogether, because, do what he will, the ship yaws more or less. "Why should I be robbed of my property to pay for teaching another man's children?" is an individualist question, which is not unfrequently put as if it settled the whole business. Perhaps it does, but I find difficulties in seeing why it should. The parish in which I live

makes me pay my share for the paving and lighting of a great many streets that I never pass through; and I might plead that I am robbed to smooth the way and lighten the darkness of other people. But I am afraid the parochial authorities would not let me off on this plea; and I must confess I do not see why they should.

## CCLXXXIII

I cannot speak of my own knowledge, but I have every reason to believe that I came into this world a small reddish person, certainly without a gold spoon in my mouth, and in fact with no discernible abstract or concrete "rights" or property of any description. If a foot was not set upon me at once, as a squalling nuisance, it was either the natural affection of those about me, which I certainly had done nothing to deserve, or the fear of the law which, ages before my birth, was painfully built up by the society into which I intruded, that prevented that catastrophe. If I was nourished, cared for, taught, saved from the vagabondage of a wastrel, I certainly am not aware that I did anything to deserve those advantages. And, if I possess anything now, it strikes me that, though I may have fairly earned my day's wages for my day's work, and may justly call them my property—yet, without that organisation of society, created out of the toil and blood of long generations before my time, I should probably have had nothing but a flint axe and an indifferent hut to call my own; and even those would be mine only so long as no stranger savage came my way.

So that if society, having quite gratuitously done all these things for me, asks me in turn to do something towards its preservation—even if that something is to contribute to the teaching of other men's children—I really, in spite of all my individualist learnings, feel rather ashamed to say no. And, if I were not ashamed, I cannot say that I think that society would be dealing unjustly with me in converting the moral obligation into a legal one. There is a manifest unfairness in letting all the burden be borne by the willing horse.

## CCLXXXIV

It is impossible to insist too strongly upon the fact that efficient teachers of science and of technology are not to be made by the processes in vogue at ordinary training colleges. The memory loaded with mere bookwork is not the thing wanted is, in fact, rather worse than useless—in the teacher of scientific subjects. It is absolutely essential that his mind should be full of knowledge and not of mere learning, and that what he knows should have been learned in the laboratory rather than in the library.

## CCLXXXV

The attempt to form a just conception of the value of work done in any department of human knowledge, and of its significance as an indication of the intellectual and moral qualities of which it was the product, is an undertaking which must always be beset with difficulties, and may easily end in making the limitations of the appraiser more obvious than the true worth of that which he appraises. For the judgment of a contemporary is liable to be obscured by intellectual incompatibilities and warped by personal antagonisms; while the critic of a later generation, though he may escape the influence of these sources of error, is often ignorant, or forgetful, of the conditions under which the labours of his predecessors have been carried on. He is prone to lose sight of the fact that without their clearing of the ground and rough-hewing of the foundation-stones, the stately edifice of later builders could not have been erected.

## CCLXXXVI

The vulgar antithesis of fact and theory is founded on a misconception of the nature of scientific theory, which is, or ought to be, no more than the expression of fact in a general form. Whatever goes beyond such expression is hypothesis; and hypotheses are not ends, but means. They should be regarded as instruments, by

which new lines of inquiry are indicated; or by the aid of which a provisional coherency and intelligibility may be given to seemingly disconnected groups of phenomena. The most useful of servants to the man of science, they are the worst of masters. And when the establishment of the hypothesis becomes the end, and fact is alluded to only so far as it suits the "Idee," science has no longer anything to do with the business.

## CCLXXXVII

Scientific observation tell us that living birds form a group or class of animals, through which a certain form of skeleton runs; and that this kind of skeleton differs in certain well-defined characters from that of mammals. On the other hand, if anyone utterly ignorant of osteology, but endowed with the artistic sense of form, were set before a bird skeleton and a mammalian skeleton, he would at once see that the two were similar and yet different. Very likely he would be unable to give clear expression to his just sense of the differences and resemblances; perhaps he would make great mistakes in detail if he tried. Nevertheless, he would be able to draw from memory a couple of sketches, in which all the salient points of likeness and unlikeness would be reproduced with sufficient accuracy. The mere osteologist, however accurately he might put the resemblances and differences into words, if he lacked the artistic visualising faculty, might be hopelessly incompetent to perform any such feat; lost in details, it might not even occur to him that it was possible; or, still more probably, the habit of looking for differences might impair the perception of resemblances.

Under these circumstances, the artist might be led to higher and broader views, and thus be more useful to the progress of science than the osteological expert. Not that the former attains the higher truth by a different method; for the way of reaching truth is one and indivisible. Whether he knows it or not, the artist has made a

generalisation from two sets of facts, which is perfectly scientific in form ; and trustworthy so far as it rests upon the direct perception of similarities and dissimilarities. The only peculiarity of the artistic application of scientific method lies in the artist's power of visualising the result of his mental processes, of embodying the facts of resemblance in a visible "type," and of showing the manner in which the differences may be represented as modifications of that type ; he does, in fact, instinctively, what an architect, who desires to demonstrate the community of plan in certain ancient temples, does by the methodical construction of plans, sections, and elevations, the comparison of which will furnish him with the "type" of such temples.

Thus, what I may term the artistic fashion of dealing with anatomy is not only perfectly legitimate, but has been of great utility. The harm of it does not begin until the attempt is made to get more out of this visual projection of thought than it contains ; until the origin of the notion of "type" is forgotten and the speculative philosopher deludes himself with the supposition that the generalisation suggested by fact is an "Idea" of the Pure Reason, with which fact must, somehow or other, be made to agree.

## CXXXVIII

Flowers are the primers of the morphologist ; those who run may read in them uniformity of type amidst endless diversity, singleness of plan with complex multiplicity of detail. As a musician might say, every natural group of flowering plants is a sort of visible fugue, wandering about a central theme which is never forsaken, however it may, momentarily, cease to be apparent.

## CCLXXXIX

Like all the really great men of literature, Goethe added some of the qualities of

the man of science to those of the artist, especially the habit of careful and patient observation of Nature. The great poet was no mere book-learned speculator. His acquaintance with mineralogy, geology, botany and osteology, the fruit of long and wide studies, would have sufficed to satisfy the requirements of a professoriate in those days, if only he could have pleaded ignorance of everything else. Unfortunately for Goethe's credit with his scientific contemporaries, and, consequently, for the attention attracted by his work, he did not come forward as a man of science until the public had ranged him among the men of literature. And when the little men have thus classified a big man, they consider that the last word has been said about him ; it appears to the thought hardly decent on his part if he venture to stray beyond the speciality they have assigned to him. It does not seem to occur to them that a clear intellect is an engine capable of supplying power to all sorts of mental factories ; nor to admit that, as Goethe somewhere pathetically remarks, a man may have a right to live for himself as well as for the public ; to follow the line of work that happens to interest him, rather than that which interests them.

On the face of the matter it is not obvious that the brilliant poet had less chance of doing good service in natural science than the dullest of dissectors and nomenclators. Indeed, as I have endeavoured to indicate, there was considerable reason, a hundred years ago, for thinking that an infusion of the artistic way of looking at things might tend to revivify the somewhat mummified body of technical zoology and botany. Great ideas were floating about ; the artistic apprehension was needed to give these airy nothings a local habitation and a name ; to convert vague suppositions into definite hypotheses. And I apprehend that it was just this service which Goethe rendered by writing his essays on the intermaxillary bone, on osteology generally, and on the metamorphoses of plants.

## CCXCV

All this is mere justice to Goethe ; but, as it is the unpleasant duty of the historian to do justice upon, as well as to, great men, it behoves me to add that the germs of the worst faults of later speculative morphologists are no less visible in his writings than their great merits. In the artist-philosopher there was, at best, a good deal more artist than philosopher ; and when Goethe ventured into the regions which belong to pure science, this excess of a virtue had all the consequences of a vice. "Trennen und zählen lag nicht in meiner Natur," says he ; but the mental operations of which "analysis and numeration" are partial expressions are indispensable for every step of progress beyond happy glimpses, even in morphology ; while, in physiology and in physics, failure in the most exact performance of these operations involves sheer disaster, as indeed Goethe was afforded abundant opportunity of learning. Yet he never understood the sharp lessons he received, and put down to malice, or prejudice, the ill-reception of his unfortunate attempts to deal with purely physical problems.

## CCCVI

There was never any lack of the scientific imagination about the great anatomist : and the charge of indifference to general ideas, sometimes brought against him, is stupidly unjust. But Cuvier was one of those happily endowed persons in whom genius never parts company with common-sense ; and whose perception of the importance of sound method is so great that they look at even a truth, hit upon by those who pursue an essentially vicious method, with the sort of feeling with which an honest trader regards the winnings of a gambler. They hold it better to remain poor than obtain riches by the road that, as a rule, leads to ruin.

## CCCVII

The irony of history is nowhere more apparent than in science. Here we see

the men, over whose minds the coming events of the world of biology cast their shadows, doing their best to spoil their case in stating it ; while the man who represented sound scientific method is doing his best to stay the inevitable progress of thought and bolster up antiquated traditions. The progress of knowledge during the last seventy years enables us to see that neither Geoffroy, nor Cuvier, was altogether right nor altogether wrong ; and that they were meant to hunt in couples instead of pulling against one another. Science has need of servants of very different qualifications ; of artistic constructors no less than of men of business ; of people to design her palaces and of others to see that the materials are sound and well-fitted together ; of some to spur investigators, and of others to keep their heads cool. The only would-be servants, who are entirely unprofitable, are those who do not take the trouble to interrogate Nature, but imagine vain things about her ; and spin, from their inner consciousness, webs, as exquisitely symmetrical as those of the most geometrical of spiders, but alas ! as easily torn to pieces by some inconsiderate bluebottle of a fact.

## CCXCIII

There is always a Cape Horn in one's life that one either weathers or wrecks one's self on.

## CCXCIV

A Local Museum should be exactly what its name implies, viz. "Local"—illustrating local Geology, local Botany, local Zoology, and local Archaeology.

Such a museum, if residents who are interested in these sciences take proper pains, may be brought to a great degree of perfection and be unique of its kind. It will tell both natives and strangers exactly what they want to know, and possess great scientific interest and importance. Whereas as the ordinary lumber-room of clubs from New Zealand, Hindoo idols, sharks' teeth, mangy monkeys, scorpions, and conch shells—who shall describe the weary

inutility of it? It is really worse than nothing, because it leads the unwary to look for the objects of science elsewhere than under their noses. What they want to know is that their "America is here," as Wilhelm Meister has it.

## CCXCV

A man who speaks out honestly and fearlessly that which he knows, and that which he believes, will always enlist the good-will and the respect, however much he may fail in winning the assent, of his fellow men.

## CCXCVI

Science and literature are not two things, but two sides of one thing.

## CCXCVII

I neither deny nor affirm the immortality of man. I see no reason for believing in it, but, on the other hand, I have no means of disproving it.

I have no *a priori* objections to the doctrine. No man who has to deal daily and hourly with nature can trouble himself about *a priori* difficulties. Give me such evidence as would justify me in believing anything else, and I will believe that. Why should I not? It is not half so wonderful as the conservation of force, or the indestructibility of matter.

Whoso clearly appreciates all that is implied in the falling of a stone can have no difficulty about any doctrine simply on account of its marvellousness. But the longer I live, the more obvious it is to me that the most sacred act of a man's life is to say and to feel, "I believe such and such to be true." All the greatest rewards and all the heaviest penalties of existence cling about that act. The universe is one and the same throughout; and if the condition of my success in unravelling some little difficulty of anatomy or physiology is that I shall rigorously refuse to put faith in that which does not rest on sufficient evidence, I cannot believe that the great

mysteries of existence will be laid open to me on other terms.

## CCXCVIII

I cannot conceive of my personality as a thing apart from the phenomena of my life. When I try to form such a conception I discover that, as Coleridge would have said, I only hypostatise a word, and it alters nothing if, with Fichte, I suppose the universe to be nothing but a manifestation of my personality. I am neither more nor less eternal than I was before.

## CCXCIX

I do not know whether the animals persist after they disappear or not. I do not even know whether the infinite difference between us and them may not be compensated by *their* persistence and *my* cessation after apparent death, just as the humble bulb of an annual lives, whilst the glorious flowers it has put forth die away.

## CCCI

My business is to teach my aspirations to confirm themselves to fact, not to try and make facts harmonise with my aspirations.

## CCCI

Science seems to me to teach in the highest and strongest manner the great truth which is embodied in the Christian conception of entire surrender to the will of God. Sit down before fact as a little child, be prepared to give up every preconceived notion, follow humbly wherever and to whatever abysses nature leads, or you shall learn nothing. I have only begun to learn content and peace of mind since I have resolved at all risks to do this.

## CCCI

There are, however, other arguments commonly brought forward in favour of the immortality of man, which are to my mind not only delusive but mischievous

The one is the notion that the moral government of the world is imperfect without a system of future rewards and punishments. The other is: that such a system is indispensable to practical morality. I believe that both these dogmas are very mischievous lies.

With respect to the first, I am no optimist, but I have the firmest belief that the Divine Government (if we may use such a phrase to express the sum of the "customs of matter") is wholly just. The more I know intimately of the lives of other men (to say nothing of my own), the more obvious it is to me that the wicked does *not* flourish nor is the righteous punished. But for this to be clear we must bear in mind what almost all forget, that the rewards of life are contingent upon obedience to the *whole* law—physical as well as moral—and that moral obedience will not atone for physical sin, or *vice versa*.

## CCCVII

The ledger of the Almighty is strictly kept, and every one of us has the balance of his operations paid over to him at the end of every minute of his existence.

Life cannot exist without a certain conformity to the surrounding universe—that conformity involves a certain amount of happiness in excess of pain. In short, as we live we are paid for living.

## CCCVIII

It is to be recollected in view of the apparent discrepancy between men's acts and their rewards that Nature is juster than we. She takes into account what a man brings with him into the world, which human justice cannot do. If I, born a bloodthirsty and savage brute, inheriting these qualities from others, kill you, my fellow-men will very justly hang me, but I shall not be visited with the horrible remorse which would be my real punishment if, my nature being higher, I had done the same thing.

## CCCV

The absolute justice of the *system of things* is as clear to me as any scientific fact. The gravitation of sin to sorrow is as certain as that of the earth to the sun, and more so—for experimental proof of the fact is within reach of us all—nay, is before us all in our own lives, if we had but the eyes to see it.

## CCCVI

Not only do I disbelieve in the need for compensation, but I believe that the seeking for rewards and punishments out of this life leads men to a ruinous ignorance of the fact that their inevitable rewards and punishments are here.

## CCCVII

If the expectation of hell hereafter can keep me from evil-doing, surely *a fortiori* the certainty of hell now will do so? If a man could be firmly impressed with the belief that stealing damaged him as much as swallowing arsenic would do (and it does), would not the dissuasive force of that belief be greater than that of any based on mere future expectations?

## CCCVIII

As I stood behind the coffin of my little son the other day, with my mind bent on anything but disputation, the officiating minister read, as a part of his duty, the words, "If the dead rise not again, let us eat and drink, for to-morrow we die." I cannot tell you how inexpressibly they shocked me. Paul had neither wife nor child, or he must have known that his alternative involved a blasphemy against all that was best and noblest in human nature. I could have laughed with scorn. What! because I am face to face with irreparable loss, because I have given back to the source from whence it came, the cause of a great happiness, still retaining through all my life the blessings which have sprung and will spring from that

cause, I am to renounce my manhood, and howling, grovel in bestiality? Why, the very apes know better, and if you shoot their young the poor brutes grieve their grief out and do not immediately seek distraction in a gorge.

## CCCX

He had intellect to comprehend his highest duty distinctly, and force of character to do it; which of us dare ask for a higher summary of his life than that? For such a man there can be no fear in facing the great unknown, his life has been one long experience of the substantial justice of the laws by which this world is governed, and he will calmly trust to them still as he lays his head down for his long sleep.

## CCCX

Whether astronomy and geology can or cannot be made to agree with the statements as to the matters of fact laid down in Genesis whether the Gospels are historically true or not are matters of comparatively small moment in the face of the impassable gulf between the anthropomorphism (however refined) of theology and the passionless impersonality of the unknown and unknowable which science shows everywhere underlying the thin veil of phenomena.

## CCCXI

I am too much a believer in Butler and in the great principle of the "Analogy" that "there is no absurdity in theology so great that you cannot parallel it by a greater absurdity of Nature" (it is not commonly stated in this way), to have any difficulties about miracles. I have never had the least sympathy with the *a priori* reasons against orthodoxy, and I have by nature and disposition the greatest possible antipathy to all the atheistic and infidel school.

## CCCXII

This universe is, I conceive, like to a great game being played out, and we poor

mortals are allowed to take a hand. By great good fortune the wiser among us have made out some few of the rules of the game, as at present played. We call them "Laws of Nature," and honour them because we find that if we obey them we win something for our pains. The cards are our theories and hypotheses, the tricks, our experimental verifications. But what sane man would endeavour to solve this problem: given the rules of a game and the winnings, to find whether the cards are made of pasteboard or gold-leaf? Yet the problem of the metaphysicians is to my mind no saner.

## CCCXIII

I have not the smallest sentimental sympathy with the negro; don't believe in him at all, in short. But it is clear to me that slavery means, for the white man, bad political economy; bad social morality; bad internal political organisation, and a bad influence upon free labour and freedom all over the world.

## CCCXIV

At the present time the important question for England is not the duration of her coal, but the due comprehension of the truths of science, and the labours of her scientific men.

## CCCXV

It is better for a man to go wrong in freedom than to go right in chains.

## CCCXVI

A good book is comparable to a piece of meat, and fools are as flies who swarm to it, each for the purpose of depositing and hatching his own particular maggot of an idea.

## CCCXVII

Children work a greater metamorphosis in men than any other condition of life. They ripen one wonderfully and make life ten times better worth having than it was

CCCXVIII

Teach a child what is wise, that is *morality*. Teach him what is wise and beautiful, that is *religion*!

CCCXIX

People may talk about intellectual teaching, but what we principally want is the moral teaching.

CCCX

We are in the midst of a gigantic movement greater than that which preceded and produced the Reformation, and really only the continuation of that movement. But there is nothing new in the ideas which lie at the bottom of the movement, nor is any reconciliation possible between free thought and traditional authority. One or other will have to succumb after a struggle of unknown duration, which will have as side issues vast political and social troubles. I have no more doubt that free thought will win in the long run than I have that I sit here writing to you, or that this free thought will organise itself into a coherent system, embracing human life and the world as one harmonious whole. But this organisation will be the work of generations of men, and those who further it most will be those who teach men to rest in no lie, and to rest in no verbal delusions.

CCCXI

Make up your mind to act decidedly and take the consequences. No good is ever done in this world by hesitation.

CCCXII

The world is neither wise nor just, but it makes up for all its folly and injustice by being damnable sentimental.

CCCXIII

Without seeing any reason to believe that women are, on the average, so strong

physically, intellectually, or morally, as men, I cannot shut my eyes to the fact that many women are much better endowed in all these respects than many men, and I am at a loss to understand on what grounds of justice or public policy a career which is open to the weakest and most foolish of the male sex should be forcibly closed to women of vigour and capacity.

CCCXIV

We have heard a great deal lately about the physical disabilities of women. Some of these alleged impediments, no doubt, are really inherent in their organisation, but nine-tenths of them are artificial the products of their modes of life. I believe that nothing would tend so effectually to get rid of these creations of idleness, weariness, and that "over stimulation of the emotions" which, in plainer-spoken days, used to be called wantonness, than a fair share of healthy work, directed towards a definite object, combined with an equally fair share of healthy play, during the years of adolescence; and those who are best acquainted with the acquirements of an average medical practitioner will find it hardest to believe that the attempt to reach that standard is like to prove exhausting to an ordinarily intelligent and well-educated young woman.

CCCXV

The only good that I can see in the demonstration of the truth of "Spiritualism" is to furnish an additional argument against suicide. Better live a crossing-sweeper than die and be made to talk twaddle by a "medium" hired at a guinea a *séance*.

CCCXVI

I ask myself suppose you knew that by inflicting prolonged pain on 100 rabbits you could discover a way to the extirpation of leprosy, or consumption, or locomotor ataxy, or of suicidal melancholia among

human beings, dare you refuse to inflict that pain? Now I am quite unable to say that I dare. That sort of daring would seem to me to be extreme moral cowardice, to involve gross inconsistency.

For the advantage and protection of society, we all agree to inflict pain upon man—pain of the most prolonged and acute character—in our prisons, and on our battlefields. If England were invaded, we should have no hesitation about inflicting the maximum of suffering upon our invaders for no other object than our own good.

But if the good of society and of a nation is a sufficient plea for inflicting pain on men, I think it may suffice us for experimenting on rabbits or dogs.

At the same time, I think that a heavy moral responsibility rests on those who perform experiments of the second kind.

The wanton infliction of pain on man or beast is a crime; pity is that so many of those who (as I think rightly) hold this view, seem to forget that the criminality lies in the wantonness and not in the act of inflicting pain *per se*.

## CCCXXVII

The one condition of success, your sole safeguard, is the moral worth and intellectual clearness of the individual citizen. Education cannot give these, but it can cherish them and bring them to the front in whatever station of society they are to be found, and the universities ought to be, and may be, the fortresses of the higher life of the nation.

## CCCXXVIII

As a matter of fact, men sin, and the consequences of their sins affect endless generations of their progeny. Men are tempted, men are punished for the sins of others without merit or demerit of their own; and they are tormented for their evil deeds as long as their consciousness lasts.

## CCCXXIX

I find that as a matter of experience, erroneous beliefs are punished, and right

beliefs are rewarded—though very often the erroneous belief is based upon a more conscientious study of the facts than the right belief.

## CCCXXX

If we are to assume that anybody has designedly set this wonderful universe going, it is perfectly clear to me that he is no more entirely benevolent and just in any intelligible sense of the words, than that he is malevolent and unjust. Infinite benevolence need not have invented pain and sorrow at all infinite malevolence would very easily have deprived us of the large measure of content and happiness that falls to our lot. After all, Butler's "Analogy" is unassailable, and there is nothing in theological dogmas more contradictory to our moral sense, than is to be found in the facts of nature. From which, however, the Bishop's conclusion that the dogmas are true doesn't follow.

## CCCXXXI

It appears to me that if every person who is engaged in an industry had access to instruction in the scientific principles on which that industry is based; in the mode of applying these principles to practice; in the actual use of the means and appliances employed; in the language of the people who know as much about the matter as we do ourselves; and lastly, in the art of keeping accounts, Technical Education would have done all that can be required of it.

## CCCXXXII

Though under-instruction is a bad thing, it is not impossible that over-instruction may be worse.

## CCCXXXIII

There are two things I really care about one is the progress of scientific thought, and the other is the bettering of the condition of the masses of the people by bettering them in the way of lifting themselves out of the misery which has hitherto been the

lot of the majority of them. Posthumous fame is not particularly attractive to me, but, if I am to be remembered at all, I would rather it should be as "a man who did his best to help the people" than by other title.

CCXXXIV

I am of opinion that our Indian Empire is a curse to us. But so long as we make up our minds to hold it, we must also make up our minds to do those things which are needful to hold it effectually, and in the long-run it will be found that so doing is real justice both for ourselves, our subject population, and the Afghans themselves.

CCXXXV

The great thing in the world is not so much to seek happiness as to earn peace and self-respect.

CCXXXVI

The more rapidly truth is spread among mankind the better it will be for them. Only let us be sure that it is truth.

CCXXXVII

Your astonishment at the tenacity of life of fallacies, permit me to say, is shockingly unphysiological. They, like other low organisms, are independent of brains, and only wriggle the more, the more they are smitten on the place where the brains ought to be.

CCXXXVIII

I don't know what you think about anniversaries. I like them, being always minded to drink my cup of life to the bottom, and take my chance of the sweets and bitters.

CCXXXIX

Of the few innocent pleasures left to men past middle life the jamming common-sense down the throats of fools is perhaps the keenest,

CCXL

Life is like walking along a crowded street -there always seem to be fewer obstacles to getting along on the opposite pavement -and yet, if one crosses over, matters are rarely mended.

CCXLI

The great thing one has to wish for as time goes on is vigour as long as one lives, and death as soon as vigour flags.

CCXLII

Whether motion disintegrates or integrates is, I apprehend, a question of conditions. A whirlpool in a stream may remain in the same spot for any imaginable time. Yet it is the effect of the motion of the particles of the water in that spot which continually integrate themselves into the whirlpool and disintegrate themselves from it. The whirlpool is permanent while the conditions last, though its constituents incessantly change. Living bodies are just such whirlpools. Matter sets into them in the shape of food, sets out of them in the shape of waste products. Their individuality lies in the constant maintenance of a characteristic form, not in the preservation of material identity.

CCXLIII

Most of us are idolaters, and ascribe divine powers to the abstractions "Force," "Gravity," "Vitality," which our own brains have created. I do not know anything about "inert" things in nature. If we reduce the world to matter and motion, the matter is not "inert," inasmuch as the same amount of motion affects different kinds of matter in different ways. To go back to my own illustration. The fabric of the watch is not inert, every particle of it is in violent and rapid motion, and the winding-up simply perturbs the whole infinitely complicated system in a particular fashion. Equilibrium means death, because life is a succession of changes, while a

changing equilibrium is a contradiction in terms. I am not at all clear that a living being is comparable to a machine running down. On this side of the question the whirlpool affords a better parallel than the watch. If you dam the stream above or below, the whirlpool dies; just as the living being does if you cut off its food, or choke it with its own waste products. And if you alter the sides or bottom of the stream you may kill the whirlpool, just as you kill the animal by interfering with its structure. Heat and oxidation as a source of heat appear to supply energy to the living machine, the molecular structure of the germ furnishing the "sides and bottom of the stream," that is, determining the results which the energy supplied shall produce.

## CCXLIV

I believe that history might be, and ought to be, taught in a new fashion so as to make the meaning of it as a process of evolution intelligible to the young

## CCXLV

Government by average opinion is merely a circuitous method of going to the devil; those who profess to lead but in fact slavishly follow this average opinion are simply the fastest runners and the loudest squeakers of the herd which is rushing blindly down to its destruction.

## CCXLVI

It's very sad to lose your child just when he was beginning to bind himself to you, and I don't know that it is much consolation to reflect that the longer he had wound himself up in your heart-strings the worse the tear would have been, which seems to have been inevitable sooner or later. One does not weigh and measure these things while grief is fresh, and in my experience a deep plunge into the waters of sorrow is the hopefiullest way of getting through them on to one's daily road of life again. No one can help another very much in these crises of life;

but love and sympathy count for something.

## CCXLVII

There is amazingly little evidence of "reverential care for unoffending creation" in the arrangements of nature, that I can discover. If our ears were sharp enough to hear all the cries of pain that are uttered in the earth by men and beasts, we should be deafened by one continuous scream!

And yet the wealth of superfluous loveliness in the world condemns pessimism. It is a hopeless riddle.

## CCXLVIII

A man who has only half as much food as he needs is indubitably starved, even though his short rations consist of ortolans and are served upon gold plate.

## CCXLIX

Economy does not lie in sparing money, but in spending it wisely.

## CCCI

We men of science, at any rate, hold ourselves morally bound to "try all things and hold fast to that which is good"; and among public benefactors, we reckon him who explodes old error, as next in rank to him who discovers new truth.

## CCCI

Whatever Linnaeus may say, man is not a rational animal especially in his parental capacity.

## CCCLII

The inquiry into the truth or falsehood of a matter of history is just as much a question of pure science as the inquiry into the truth or falsehood of a matter of geology, and the value of evidence in the two cases must be tested in the same way. If anyone tells me that the evidence of the existence of man in the miocene epoch is

as good as that upon which I frequently act every day of my life, I reply that this is quite true, but that it is no sort of reason for believing in the existence of miocene man.

Surely no one but a born fool can fail to be aware that we constantly, and in very grave conjunctures, are obliged to act upon extremely bad evidence, and that very often we suffer all sorts of penalties in consequence. And surely one must be something worse than a born fool to pretend that such decision under the pressure of the enigma of life ought to have the smallest influence in those judgments which are made with due and sufficient deliberation.

## CCCLIII

1. The Church founded by Jesus has not made its way; has not permeated the world but *does* become extinct in the country of its birth as Nazareism and Eionism.

2. The Church that did make its way and coalesced with the State in the 4th century had no more to do with the Church founded by Jesus than Ultramontanism has with Quakerism. It is Alexandrian Judaism and Neoplatonistic mystagogy, and as much of the old idolatry and demonology as could be got in under new or old names.

3. Paul has said that the Law was schoolmaster to Christ with more truth than he knew. Throughout the Empire the synagogues had their cloud of Gentile hangers-on - those who "feared God" - and who were fully prepared to accept a Christianity, which was merely an expurgated Judaism and the belief in Jesus as the Messiah.

4. The Christian "Sodalitia" were not merely religious bodies, but friendly societies, burial societies, and guilds. They hung together for all purposes - the mob hated them as it now hates the Jews in Eastern Europe, because they were more frugal, more industrious, and lived better lives than their neigh-

bours, while they stuck together like Scotchmen.

If these things are so - and I appeal to your knowledge of history that they are so - what has the success of Christianity to do with the truth or falsehood of the story of Jesus?

## CCCLIV

It is Baur's great merit to have seen that the key to the problem of Christianity lies in the Epistle to the Galatians. No doubt he and his followers rather overdid the thing, but that is always the way with those who take up a new idea.

## CCCLV

If a man cannot do brain work without stimulants of any kind he had better turn to hand work it is an indication on Nature's part that she did not mean him to be a head worker.

## CCCLVI

It is not to be forgotten that what we call rational grounds for our beliefs are often extremely irrational attempts to justify our instincts.

## CCCLVII

Even the best of modern civilisations appears to me to exhibit a condition of mankind which neither embodies any worthy ideal nor even possesses the merit of stability. I do not hesitate to express my opinion that, if there is no hope of a large improvement of the condition of the greater part of the human family; if it is true that the increase of knowledge, the winning of a greater dominion over Nature which is its consequence, and the wealth which follows upon that dominion, are to make no difference in the extent and the intensity of Want, with its concomitant physical and moral degradation, among the masses of the people, I should hail the advent of some kindly comet, which would sweep the whole affair away, as a desirable con-

summation. What profits it to the human Prometheus that he has stolen the fire of heaven to be his servant, and that the spirits of the earth and of the air obey him, if the vulture of pauperism is eternally to tear his very vitals and keep him on the brink of destruction?

## CCCLVIII

No induction, however broad its basis, can confer certainty in the strict sense of the word. The experience of the whole human race through innumerable years has shown that stones unsupported fall to the ground, but that does not make it certain that any day next week unsupported stones will not move the other way. All that it does justify is the very strong expectation, which hitherto has been invariably verified, that they will do just the contrary.

Only one absolute certainty is possible to man namely, that at any given moment the feeling which he has exists.

All other so-called certainties are beliefs of greater or less intensity.

## CCCLIX

Of moral purpose I see no trace in Nature. That is an article of exclusively human manufacture—and very much to our credit.

## CCCLX

There is nothing of permanent value (putting aside a few human affections), nothing that satisfies quiet reflection—except the sense of having worked according to one's capacity and light, to make things clear and get rid of cant and shams of all sorts. That was the lesson I learned from Carlyle's books when I was a boy, and it has stuck by me all my life.

You may make more of failing to get money, and of succeeding in getting abuse --until such time in your life (if you are teachable) you have ceased to care much about either.

## CCCLXI

The doctrine of the conservation of energy tells neither one way nor the other [on the doctrine of immortality]. Energy is the cause of movement of body, *i.e.* things, having mass. States of consciousness, have no mass, even if they can be conceded to be movable. Therefore even if they are caused by molecular movements, they would not in any way affect the store of energy.

Physical causation need not be the only kind of causation, and when Cabanis said that thought was a function of the brain, in the same way as bile secretion is a function of the liver, he blundered philosophically. Bile is a product of the transformation of material energy. But in the mathematical sense of the word "function," thought may be a function of the brain. That is to say, it may arise only when certain physical particles take on a certain order.

By way of a coarse analogy, consider a parallel-sided piece of glass through which light passes. It forms no picture. Shape it so as to be a bi-convex, and a picture appears in its focus.

Is not the formation of the picture a "function" of the piece of glass thus shaped?

So, from your own point of view, suppose a mind-stuff—*λόγος* a nonmental cosmic light such as is shadowed in the faint gospel. The brain of a dog will convert it into one set of phenomenal pictures, and the brain of a man into another. But in both cases the result is the consequence of the way in which the respective brains perform their "function."

## CCCLXII

The actions we call sinful are as much the consequence of the order of nature as those we call virtuous. They are part and parcel of the struggle for existence through which all living things have passed, and they have become sins because man alone seeks a higher life in voluntary association.

Therefore the instrument has never been marred ; on the contrary, we are trying to get music out of harps, sacbuts, and psalteries, which never were in tune, and seemingly never will be.

CCCLXIII

I have always been, am, and propose to remain a mere scholar. All that I have ever proposed to myself is to say, this and this I have learned ; thus and thus have I learned it : go thou and learn better ; but do not thrust on my shoulders the responsibility for your own laziness if you elect to take, on my authority, conclusions, the value of which you ought to have tested for yourself.

CCCI XIV

There is endless backwoodsman's work yet to be done. If "those also serve who only stand and wait," still more do those who sweep and cleanse ; and if any man elect to give his strength to the weeder's and scavenger's occupation, I remain of the opinion that his service should be counted acceptable, and that no one has a right to ask more of him than faithful performance of the duties he has undertaken. I venture to count it an improbable suggestion that any such person - a man, let us say, who has well-nigh reached his threescore years and ten, and has graduated in all the faculties of human relationships ; who has taken his share in all the deep joys and deeper anxieties which cling about them ; who has felt the burden of young lives entrusted to his care, and has stood alone with his dead before the abyss of the eternal - has never had a thought beyond negative criticism. It seems to me incredible that such an one can have done his day's work, always with a light heart, with no sense of responsibility, no terror of that which may appear when the factitious veil of Isis - the thick web of fiction man has woven round nature is stripped off.

CCCI XV

If the doctrine of a Providence is to be taken as the expression, in a way "to be understood of the people," of the total exclusion of chance from a place even in the most insignificant corner of Nature, if it means the strong conviction that the cosmic process is rational, and the faith that, throughout all duration, unbroken order has reigned in the universe, I not only accept it, but I am disposed to think it the most important of all truths. As it is of more consequence for a citizen to know the law than to be personally acquainted with the features of those who will surely carry it into effect, so this very positive doctrine of Providence, in the sense defined, seems to me far more important than all the theorems of speculative theology. If, further, the doctrine is held to imply that, in some indefinitely remote past aeon, the cosmic process was set going by some entity possessed of intelligence and foresight, similar to our own in kind, however superior in degree, if, consequently, it is held that every event, not merely in our planetary speck, but in untold millions of other worlds, was foreknown before these worlds were, scientific thought, so far as I know anything about it, has nothing to say about that hypothesis. It is, in fact, an anthropomorphic rendering of the doctrine of evolution.

It may be so, but the evidence accessible to us is, to my mind, wholly insufficient to warrant either a positive or a negative conclusion.

CCCLXVI

It may be well to remember that the highest level of moral aspiration recorded in history was reached by a few ancient Jews Micah, Isaiah, and the rest - who took no count whatever of what might or what might not happen to them after death. It is not obvious to me why the same point should not by and by be reached by the Gentiles.

CCLXVII

Belief in majorities is not rooted in my breast, and if all the world were against me the fact might warn me to revise and criticise my opinions, but would not in itself supply a ghost of a reason for forsaking them. For myself I say deliberately, it is better to have a millstone tied round the neck and be thrown into the sea than to share the enterprises of those to whom the world has turned, and will turn, because they minister to its weaknesses and cover up the awful realities which it shudders to look at.

CCLXVIII

Moral duty consists in the observance of those rules of conduct which contribute to the welfare of society, and by implication, of the individuals who compose it.

The end of society is peace and mutual protection, so that the individual may reach the fullest and highest life attainable by man. The rules of conduct by which this end is to be attained are discoverable like the other so-called laws of Nature by observation and experiment, and only in that way.

Some thousands of years of such experience have led to the generalisations, that stealing and murder, for example, are inconsistent with the ends of society. There is no more doubt that they are so than that unsupported stones tend to fall. The man who steals or murders, breaks his implied contract with society, and forfeits all protection. He becomes an outlaw, to be dealt with as any other feral creature. Criminal law indicates the ways which have proved most convenient for dealing with him.

All this would be true if men had no "moral sense" at all, just as there are rules of perspective which must be strictly observed by a draughtsman, and are quite independent of his having any artistic sense.

CCLXIX

The moral sense is a very complex affair—dependent in part upon associations of pleasure and pain, approbation and dis-

approbation formed by education in early youth, but in part also on an innate sense of moral beauty and ugliness (how originated need not be discussed), which is possessed by some people in great strength, while some are totally devoid of it—just as some children draw, or are enchanted by music while mere infants, while others do not know "Cherry Ripe" from "Rule Britannia," nor can represent the form of the simplest thing to the end of their lives.

Now for this last sort of people there is no reason why they should discharge any moral duty, except from fear of punishment in all its grades, from mere disapprobation to hanging, and the duty of society is to see that they live under wholesome fear of such punishment short, sharp, and decisive.

For the people with a keen innate sense of moral beauty there is no need of any other motive. What they want is knowledge of the things they may do and must leave undone, if the welfare of society is to be attained. Good people so often forget this that some of them occasionally require hanging almost as much as the bad.

If you ask why the moral inner sense is to be (under due limitations) obeyed; why the few who are steered by it move the mass in whom it is weak? I can only reply by putting another question. Why do the few in whom the sense of beauty is strong—Shakespeare, Raffaele, Beethoven, carry the less endowed multitude away? But they do, and always will. People who overlook that fact attend neither to history nor to what goes on about them.

Benjamin Franklin was a shrewd, excellent, kindly man. I have great respect for him. The force of genial common-sense respectability could no further go. George Fox was the very antipodes of all this, and yet one understands how he came to move the world of his day, and Franklin did not.

CCLXX

As to whether we can fulfil the moral law, I should say hardly any of us. Some

of us are utterly incapable of fulfilling its plainest dictates. As there are men born physically cripples, and intellectually idiots, so there are some who are moral cripples and idiots, and can be kept straight ~~now~~ even by punishment. For these people there is nothing but shutting up, or extirpation.

CCCLXI

The cardinal fact in the University questions appears to me to be this: that the student to whose wants the mediæval University was adjusted, looked to the past and sought book-learning, while the modern looks to the future and seeks the knowledge of things.

The mediæval view was that all knowledge worth having was explicitly or implicitly contained in various ancient writings; in the Scriptures, in the writings of the greater Greeks, and those of the Christian Fathers. Whatever apparent novelty they put forward, was professedly obtained by deduction from ancient data.

The modern knows that the only source of real knowledge lies in the application of scientific methods of enquiry to the ascertainment of the facts of existence; that the ascertainable is infinitely greater than the ascertained, and that the chief business of the teacher is not so much to make scholars as to train pioneers.

From this point of view, the University occupies a position altogether independent of that of the coping-stone of schools for general education, combined with technical schools of Theology, Law, and Medicine. It is not primarily an institution for testing the work of schoolmasters, or for ascertaining the fitness of young men to be curates, lawyers, or doctors.

It is an institution in which a man who claims to devote himself to Science or Art, should be able to find some one who can teach him what is already known, and train him in the methods of knowing more.

CCCLXXII

The besetting sin of able men is impatience of contradiction and of criticism.

Even those who do their best to resist the temptation, yield to it almost unconsciously and become the tools of toadies and flatterers. "Authorities," "disciples," and "schools" are the curse of science; and do more to interfere with the work of the scientific spirit than all its enemies.

CCCLXVIII

People never will recollect, that mere learning and mere cleverness are of next to no value in life, while energy and intellectual grip, the things that are inborn and cannot be taught, are everything.

CCCLXXIV

In my opinion a man's first duty is to find a way of supporting himself, thereby relieving other people of the necessity of supporting him. Moreover, the learning to do work of practical value in the world, in an exact and careful manner, is of itself a very important education, the effects of which make themselves felt in all other pursuits. The habit of doing that which you do not care about when you would much rather be doing something else, is invaluable.

CCCLXXV

Success in any scientific career requires an unusual equipment of capacity, industry and energy. If you possess that equipment you will find leisure enough after your daily commercial work is over, to make an opening in the scientific ranks for yourself. If you do not, you had better stick to commerce.

Nothing is less to be desired than the fate of a young man, who, as the Scotch proverb says, in 'trying to make a spoon spoils a horn,' and becomes a mere hanger-on in literature or in science, when he might have been a useful and a valuable member of Society in other occupations.

CCCLXXVI

Playing Providence is a game at which one is very apt to burn one's fingers.

CCCLXXVII

I conceive that the leading characteristic of the nineteenth century has been the rapid growth of the scientific spirit, the consequent application of scientific methods of investigation to all the problems with which the human mind is occupied, and the correlative rejection of traditional beliefs which have proved their incompetence to bear such investigation.

CCCLXXVIII

Science reckons many prophets, but there is not even a promise of a Messiah.

CCCLXXIX

I have not the slightest doubt about the magnitude of the evils which accrue from the steady increase of European armaments; but I think that this regrettable fact is merely the superficial expression of social forces, the operation of which cannot be sensibly affected by agreements between Governments.

In my opinion it is a delusion to attribute the growth of armaments to the "exactions of militarism." The "exactions of industrialism," generated by international commercial competition, may, I believe, claim a much larger share in prompting that growth. Add to this the French thirst for revenge, the most just determination of the German and Italian peoples to assert their national unity; the Russian Panslavonic fanaticism and desire for free access to the western seas; the Papacy steadily fishing in the troubled waters for the means of recovering its lost (I hope for ever lost) temporal possessions and spiritual supremacy; the "sick man," kept alive only because each of his doctors is afraid of the other becoming his heir.

When I think of the intensity of the perturbing agencies which arise out of these and other conditions of modern European society, I confess that the attempt to counteract them by asking

Governments to agree to a maximum military expenditure, does not appear to me to be worth making; indeed I think it might do harm by leading people to suppose that the desires of Governments are the chief agents in determining whether peace or war shall obtain in Europe.

CCCLXXX

I am not afraid of the priests in the long-run. Scientific method is the white ant which will slowly but surely destroy their fortifications. And the importance of scientific method in modern practical life—always growing and increasing—is the guarantee for the gradual emancipation of the ignorant upper and lower classes, the former of whom especially are the strength of the priests.

CCCLXXXI

There is such a thing as a science of social life, for which, if the term had not been so helplessly degraded, Politics is the proper name.

Men are beings of a certain constitution, who, under certain conditions, will as surely tend to act in certain ways as stones will tend to fall if you leave them unsupported. The laws of their nature are as invariable as the laws of gravitation, only the applications to particular cases offer worse problems than the case of the three bodies.

The Political Economists have gone the right way to work—the way that the physical philosopher follows in all complex affairs—by tracing out the effects of one great cause of human action, the desire of wealth, supposing it to be unchecked.

If they, or other people, have forgotten that there are other potent causes of action which may interfere with this, it is no fault of scientific method, but only their own stupidity.

Hydrostatics is not a "dismal science," because water does not always seek the lowest level—*e.g.* from a bottle turned

upside down, if there is a cork in the neck!

There is much need that somebody should do for what is vaguely called "Ethics" just what the Political Economists have done. Settle the question of what will be done under the unchecked action of certain motives, and leave the problem of "ought" for subsequent consideration.

For, whatever they ought to do, it is quite certain the majority of men will act as if the attainment of certain positive and negative pleasures were the end of action.

We want a science of "Eubiotics" to tell us exactly what will happen if human beings are exclusively actuated by the desire of well-being in the ordinary sense. Of course the utilitarians have laid the foundations of such a science, with the result that the nickname of genius called this branch of science "pig philosophy," making just the same blunder as when he called political economy "dismal science."

"Moderate well-being" may be no more the worthiest end of life than wealth. But if it is the best to be had in this queer world -it may be worth trying for.

## CCCLXXVII

Those who wish to attain to some clear and definite solution of the great problems which Mr. Darwin was the first person to set before us in later times must base themselves upon the facts which are stated in his great work, and, still more, must pursue their inquiries by the methods of which he was so brilliant an exemplar throughout the whole of his life. You must have his sagacity, his untiring search after the knowledge of fact, his readiness

always to give up a preconceived opinion to that which was demonstrably true, before you can hope to carry his doctrines to their ultimate issue; and whether the particular form in which he has put them before us may be such as is finally destined to survive or not is more, I venture to think, than anybody is capable at this present moment of saying. But this one thing is perfectly certain—that it is only by pursuing his methods, by that wonderful single-mindedness, devotion to truth, readiness to sacrifice all things for the advance of definite knowledge, that we can hope to come any nearer than we are at present to the truths which he struggled to attain.

## CCCLXXVIII

Dean Stanley told me he thought being made a bishop destroyed a man's moral courage. I am inclined to think that the practice of the methods of political leaders destroys their intellect for all serious purposes.

## CCCLXXIX

It is one of the most saddening things in life that, try as we may, we can never be certain of making people happy, whereas we can almost always be certain of making them unhappy.

## CCCLXXX

Men, my dear, are very queer animals, a mixture of horse-nervousness, ass-stubbornness and camel-malice with an angel bobbing about unexpectedly like the apple in the posset, and when they can do exactly as they please, they are very hard to drive.



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# SOCIAL STATICS

## NOTE

[Herbert Spencer's conclusions on social questions went through a process of evolution, and in later years he relinquished views which he had held at a less mature period of his intellectual life.

In a letter written by him to Mr. A. J. Balfour in 1901, he protested against the possibility of anybody publishing, seven years after his death, imperfect versions of his books of which the copyright had expired, though the authoritative versions were still copyright. "This," he added, "I should regard as a disaster."

Mr. Spencer's Trustees have therefore arranged for the publication of this cheap copyright edition of *Social Statics* in the only text which represents the author's final opinions.]

# SOCIAL STATICS

ABRIDGED AND REVISED

BY

HERBERT SPENCER

"In this revision [1892] of his first book, two main considerations guided him—the omission or modification of passages that no longer expressed his matured convictions, and the omission of parts treated more systematically in the *Principles of Ethics*."—DR. DAVID DUNCAN, *Life and Letters of Herbert Spencer*, 1908, p. 308.

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1910



## PREFACE

PUBLISHED in December 1850, this work in its original form was entitled *Social Statics: or, the Conditions essential to Human Happiness specified, and the first of them developed*. A number of years passed—some ten, I think—before the edition was exhausted; and as the demand seemed not great enough to warrant the setting up of type for a new edition, it was decided to import an edition from America, where the work had been stereotyped. After this had been disposed of a third edition was similarly imported.

In the meantime I had relinquished some of the conclusions drawn from the first principle laid down. Further, though still adhering to this first principle, one of the bases assigned for it had been given up by me. To the successive editions I therefore prefixed the statement that some of the doctrines set forth needed qualification; but excused myself from making the changes called for, because they could not be made without suspending more important work. Eventually, it became manifest that the warning given did not prevent misinterpretations of my later beliefs; and therefore, ten years ago, after all copies of the third edition had been sold, I resolved not again to import a supply to meet the still-continued demand.

As, however, the fundamental idea enunciated, and many of the deductions, have survived in me, I have all along intended that these should be put in a permanently accessible form; and in 1890 at leisure times I went through the work, erasing some portions, abridging others, and subjecting the whole to a careful verbal revision. Its purely systematic division is now replaced by Part IV of *The Principles of Ethics: Justice*—a part in which the ethical doctrine originally set forth in an imperfect form, is freed from its crudities and made scientifically coherent. But *Justice* contains neither the discussions which, in *Social Statics*, preceded the constructive division, nor the series of chapters in which, towards the close, the political implications were pointed out. Both of these portions seem worth preserving.

I am desirous of preserving also certain passages containing ideas, and the germs of ideas, which, since 1850, have undergone large developments. These have a

## PREFACE

certain biographico-historical interest, as indicating stages of growth in thoughts. The more significant of them will be found on p. 21, pp. 21-23, pp. 65-66, pp. 79-80, p. 95, pp. 107-8, p. 128, pp. 130-31, pp. 139-41.

In the latter part of the work, numerous references are made to the events of the day and to institutions existing when it was written. During the forty years which have since passed, social changes have diminished or destroyed the relevancy of some of these references. It has seemed best, however, to leave them as they were; partly because the arguments remain equally valid though their data are altered; partly because substituting other illustrations would entail on me more labour than I can now afford; and partly because, even were the illustrations brought up to date, lapse of years would soon make them out of date.

My first intention was to call this volume, or rather part of a volume, "Fragments from Social Statics," and afterwards, "Selections from Social Statics." Both of these titles, however, seemed to indicate a much less coherent assemblage of parts than it contains. On the other hand, to call it an abridgment is somewhat misleading; since the word fails to imply that large and constructively-important parts are omitted. No title, however, appears appropriate; and I have at length decided that *Social Statics, abridged and revised*, is the least inappropriate.

*London, January, 1892.*

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# SOCIAL STATICS

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## HAPPINESS AS AN IMMEDIATE AIM

ASSUMING it to be in other respects satisfactory, a rule, principle, or axiom, is valuable only in so far as the words in which it is expressed have definite meanings. We must therefore take it for granted that when he announced "the greatest happiness of the greatest number," or otherwise "the greatest happiness," as the canon of social morality, its originator supposed mankind to be unanimous in their conception of "greatest happiness."

This was an unfortunate assumption, for the standard of happiness is infinitely variable. In all ages—among every people—by each class—do we find different notions of it entertained. To the wandering gipsy a home is tiresome; whilst a Swiss is miserable without one. The heaven of the Hebrew is "a city of gold and precious stones, with a supernatural abundance of corn and wine"; that of the Turk a harem peopled by houris; that of the American Indian—a "happy hunting ground." In the Norse paradise there were to be daily battles, with magical healing of wounds; while the Australian hopes that after death he shall "jump up a white fellow, and have plenty of sixpences." Descending to individual instances, we find Louis XVI. interpreting "greatest happiness" to mean -- making locks; instead of which his successor read—making empires. To a miserly Elwes the hoarding of money was the only enjoyment of life; but Day, the philanthropic author of "Sandford and Merton," could find no pleasurable

employment save in its distribution. The ambitions of the tradesman and the artist are anything but alike; and could we compare the air castles of the ploughman and the philosopher, we should find them of widely different styles of architecture.

Generalizing such facts, we see that the idea of "greatest happiness" is as variable as the other elements of human nature. Between nations the differences of opinion are conspicuous enough. On contrasting the Hebrew patriarchs with their existing descendants, we observe that even in the same race the beau ideal of existence changes. The members of each community disagree upon the question. Neither, if we compare the wishes of the gluttonous schoolboy with those of the earth-scouring transcendentalist into whom he may afterwards grow, do we find any constancy in the individual.

The rationale of this is simple enough. Happiness signifies a gratified state of all the faculties. The gratification of a faculty is produced by its exercise. To be agreeable that exercise must be proportionate to the power of the faculty: if it is insufficient discontent arises, and its excess produces weariness. Hence, to have complete felicity is to have all the faculties exerted in the ratio of the several developments; and an ideal arrangement of circumstances calculated to secure this constitutes the standard of "greatest happiness." But the minds of no two individuals contain the same combination of elements.

There is in each a different balance of desires. Therefore the conditions adapted for the highest enjoyment of one, would not perfectly compass the same end for any other. And, consequently, the notion of happiness must vary with the disposition and character; that is, must vary indefinitely.

The allegation that these are hyper-critical objections, and that for all practical purposes we agree sufficiently well as to what "greatest happiness" means, will possibly be made by some. This allegation is easily disposed of; for there are plenty of questions practical enough to satisfy such cavillers, about which men exhibit none of this assumed unanimity. For example:—

— What is the ratio between the mental and bodily enjoyments constituting "greatest happiness"? There is a point up to which increase of mental activity produces increase of happiness; but beyond which, it produces in the end more pain than pleasure. Where is that point? Some appear to think that intellectual culture and the gratifications deriveable from it can hardly be carried too far. Others maintain that already among the educated classes mental excitements are taken in excess; and that were more time given to physical activities, a larger amount of enjoyment would be obtained. If "greatest happiness" is to be the rule, it becomes needful to decide which of these opinions is correct; and, further, to determine the boundary between the use and abuse of every faculty.

— Which is most truly an element in the desired felicity, content or aspiration? The generality assume that, as a matter of course, content is. There are others, however, who hold that but for discontent we should have been still savages. It is in their eyes the greatest incentive to progress. Nay, they maintain that were content the order of the day, society would even now begin to decay. It is required to reconcile these contradictory theories.

— And this synonym for "greatest

happiness"—this "utility"—what shall be comprised under it? The million would confine it to the things which directly or indirectly minister to the bodily wants, and in the words of the adage "help to get something to put in the pot." Others there are who think mental culture useful in itself, irrespective of so-called practical results, and would therefore teach astronomy, geology, anatomy, ethnology, &c., together with logic and metaphysics. Unlike some of the Roman writers who held practice of the fine arts to be vicious, there are now many who suppose utility to comprehend poetry, painting, sculpture, and whatever aids the refinement of the taste. While an extreme party maintains that music, dancing, the drama, and what are commonly called amusements, are equally worthy to be included. In place of all which discordance we ought to have agreement.

— Whether shall we adopt the theory of some that felicity means the greatest possible enjoyment of this life's pleasures, or that of others, that it consists in anticipating the pleasures of a life to come? And if we compromise the matter, and say it should combine both, how much of each shall go to its composition?

— Or what must we think of this wealth-seeking age of ours? Shall we consider the total absorption of time and energy in business—the spending of life in the accumulation of the means to live, as constituting "greatest happiness," and act accordingly? Or how shall we hold that this is to be regarded as the voracity of a larva assimilating material for the development of the future psyche?

Not only, therefore, is an agreement as to the meaning of "greatest happiness" theoretically impossible, but it is also manifest that men are at issue upon all topics which, for their determination, require defined notions of it. So that in directing us to this "greatest happiness of the greatest number," as the object towards which we should steer, our pilot "keeps the word of promise to

## UNGUIDED EXPEDIENCY

our ear and breaks it to our hope." What he shows us through his telescope is a *fata morgana*, and not the promised land. The real haven sought dips far

down below the horizon, and has yet been seen by none. Faith not sight must be our guide. We cannot do without a compass.

## UNGUIDED EXPEDIENCY

EVEN were the fundamental proposition of the expediency system not thus vitiated by the indefiniteness of its terms, it would still be vulnerable. Granting for the sake of argument, that the *desideratum*, "greatest happiness," is duly comprehended, its identity and nature agreed upon by all, and the direction in which it lies satisfactorily settled, there yet remains the unwarranted assumption that it is possible to determine empirically by what methods it may be achieved. Experience daily proves that an uncertainty like that which exists respecting the specific ends to be obtained, exists respecting the right mode of attaining them when supposed to be known. Let us look at a few cases.

When it was enacted in Bavaria that no marriage should be allowed between those without capital, unless certain authorities could "see a reasonable prospect of the parties being able to provide for their children," it was intended to advance the public weal by checking improvident unions, and redundant population: a purpose most politicians will consider praiseworthy, and a provision which many will think well adapted to secure it. Nevertheless this apparently sagacious measure has by no means answered its end. In Munich, the capital of the kingdom, half the births are illegitimate!

Those too were admirable motives, and cogent reasons, which led our Government to establish an armed force on the

coast of Africa for the suppression of the slave trade. What could be more essential to the "greatest happiness" than the annihilation of the abominable traffic? And how could forty ships of war, supported by an expenditure of £700,000 a year, fail to accomplish this? The results have, however, been anything but satisfactory. When the abolitionists of England advocated it, they little thought that such a measure instead of preventing would only "aggravate the horrors, without sensibly mitigating the extent of the traffic"; that it would generate fast-sailing slavers with decks one foot six inches apart, suffocation from close packing, miserable diseases, and a mortality of thirty-five per cent. They dreamed not that when hard pressed a slaver might throw a whole cargo of 500 negroes into the sea; nor that on a blockaded coast the disappointed chiefs would, as at Gallinas, put to death 200 men and women, and stick their heads on poles along shore, in sight of the squadron.<sup>1</sup> In short, they never anticipated having to plead, as they now do, for the abandonment of coercion.

The Spitalfields weavers afford us another case in point. No doubt the temptation which led them to obtain the Act of 1773, fixing a minimum of wages, was a strong one; and the anticipations of greater comfort to be secured by its

<sup>1</sup> See Anti-Slavery Society's Report for 1847; and Evidence before Parliamentary Committee, 1848.

enforcement must have seemed reasonable enough to all. Unfortunately, however, the weavers did not consider the consequences of being interdicted from working at reduced rates, and little expected that before 1793 some 4,000 looms would be brought to a stand in consequence of the trade going elsewhere.

To mitigate distress having appeared needful for the production of the "greatest happiness," the English people have sanctioned upwards of one hundred Acts of Parliament having this end in view; each of them arising out of the failure or incompleteness of Acts previously passed. Men are nevertheless still discontented with the Poor Laws, and we are seemingly as far as ever from satisfactory settlement of them.

But why cite individual cases? Does not the experience of all nations testify to the futility of these empirical attempts at the acquisition of happiness? What is the statute-book but a record of such unhappy guesses? or history but a narrative of their unsuccessful issues? And what forwarder are we now? Is not our Government as busy still as though the work of law-making commenced but yesterday? Nearly every parliamentary proceeding is a tacit confession of incompetence. There is scarcely a bill introduced but is entitled "An Act to amend an Act." The "Whereas" of almost every preamble heralds an account of the miscarriage of previous legislation.

The expediency-philosophy, however, ignores this world full of facts. Though men have so constantly been balked in their attempts to secure, by legislation, any desired constituent of that complex whole, "greatest happiness," it continues to place confidence in the unaided judgments of statesmen. It asks no guide;

it possesses no eclectic principle; but it assumes that after an inspection of the aggregate phenomena of national life, governments are qualified to devise such measures as shall be "expedient." It considers the interpretation of human nature so easy, the constitution of the social organism so simple, the causes of a people's conduct so obvious, that a general inspection can give to "collective wisdom" the insight requisite for law-making.

If, without any previous investigation of the properties of terrestrial matter, Newton had proceeded at once to study the dynamics of the solar system, and after years spent in contemplation of it and in setting down the distances, sizes, times of revolution, inclinations of axes, forms of orbits, perturbations, &c., of its component bodies, had set himself to digest this accumulated mass of observations, and to educe a physical interpretation of planetary motions, he might have cogitated to all eternity without arriving at the truth.

But futile as such a method of research would have been, it would have been less futile than the attempt to find out the principles of public polity, by an unguided examination of that intricate combination—society. Considering that men as yet so imperfectly understand *man*—the instrument by which, and the material on which, laws are to act—and that a knowledge of the unit—*man*, is but a first step to the comprehension of the mass—*society*, it seems obvious that to educe from the complicated phenomena presented by humanity at large a true philosophy of social life, and to found thereon a code of rules for the obtaining of "greatest happiness," is a task beyond the ability of any finite mind.

## THE MORAL-SENSE DOCTRINE

HAD we no other inducement to eat than that arising from the prospect of certain advantages to be thereby obtained, it is scarcely probable that our bodies would be so well cared for as now. One can quite imagine that were we deprived of that punctual monitor—appetite, and left to the guidance of some reasoned code of rules, such rules, were they never so philosophical, and the benefits of obeying them never so obvious, would form but a very inefficient substitute. Or, instead of that powerful affection by which men are led to nourish and protect their offspring, did there exist merely an abstract opinion that it is proper or necessary to maintain the population of the globe, it is questionable whether the annoyance, anxiety, and expense, of providing for a posterity, would not so far exceed the anticipated good, as to involve a rapid extinction of the species. And if, in addition to these needs of the body and of the race, all other requirements of our nature were similarly consigned to the sole care of the intellect—were knowledge, property, freedom, reputation, friends, sought only at its dictation then would our investigations be so perpetual, our estimates so complex, our decisions so difficult, that life would be wholly occupied in the collection of evidence and the balancing of probabilities. Under such an arrangement the utilitarian philosophy would indeed have strong argument in nature; for it would be simply applying to society, that system of governance by appeal to calculated final results, which already ruled the individual.

Quite different, however, is the method of nature. Answering to each of the actions which it is requisite for us to perform, we find in ourselves some prompter called a desire; and the more essential the action, the more powerful is the impulse to its performance, and

the more intense the gratification derived therefrom. Thus, the longings for food, for sleep, for warmth, are irresistible; and quite independent of foreseen advantages. The continuance of the race is secured by others equally strong, whose dictates are followed, not in obedience to reason, but often in defiance of it. That men are not impelled to accumulate the means of subsistence solely by a view to consequences, is proved by the existence of misers, in whom the love of acquirement is gratified to the neglect of the ends to be subserved.

May we not then reasonably expect to find kindred instrumentalities prompting the conduct called moral? All must admit that we are guided to our bodily welfare by instincts; that from instincts also, spring those domestic relationships by which other important objects are compassed; and that certain prompters called sentiments secure our indirect benefit, by regulating social intercourse. Is it not then probable that a like mental mechanism is at work throughout; and that upright conduct in each being necessary to the happiness of all, there exists in us an impulse towards such conduct; or, in other words, that we possess a "Moral Sense"?

In bar of this conclusion it is urged, that did there exist such an agency, men would exhibit a more manifest obedience to its supposed dictates than they do. There would be a greater uniformity of opinion as to the rightness or wrongness of actions; and we should not, as now, find one man, or nation, considering as a virtue, what another regards as a vice—a Thug regarding as a religious act, that assassination at which a European shudders—an Egyptian piquing himself on his successful lying—a red Indian on his undying revenge.

Overwhelming as this objection appears, it may be met thus:—None

deny the universal existence of that instinct already adverted to, which urges us to take the food needful to support life ; and none deny that such instinct is highly beneficial, and in all likelihood essential to being. Nevertheless there are not wanting infinite evils and incongruities, arising out of its rule. All know that appetite does not invariably guide men aright in the choice of food, either as to quality or quantity. Neither can any maintain that its dictates are uniform in different persons and peoples. Like irregularities may be found in the workings of parental affection. Among ourselves, its beneficial sway is tolerably regular. In many places, however, infanticide is practised now as it ever has been. During early European times, it was common to expose babes to the tender mercies of wild beasts. And it was the Spartan practice to cast all the newly-born who were not approved by a committee of old men, into a public pit provided for the purpose. If, then, it be argued that the want of uniformity in men's moral codes, together with the weakness and partiality of their influence, prove the non-existence of a sentiment prompting right actions, it must be inferred from analogous irregularities in men's conduct as to food and offspring, that there are no such feelings as appetite and parental affection. As, however, we do not draw this inference in the one case, we cannot do so in the other.

That we possess something which "may not improperly be called a moral sense, may be best proved by evidence drawn from the lips of those who assert that we have it not. Bentham unwittingly derives his initial proposition from an oracle whose existence he denies. "One man," he remarks, speaking of Shaftesbury, "says he has a thing made on purpose to tell him what is right and what is wrong ; and that it is called a *moral sense*; and then he goes to work at his ease, and says such and such a thing is right, and such and such a

thing is wrong. Why? 'because my moral sense tells me it is.'" Now that Bentham should have no other authority for his own maxim, is somewhat unfortunate for him. Yet, on putting that maxim into critical hands, we shall soon discover such to be the fact. Let us do this.

"And so you think," says the patrician, "that the object of our rule should be 'the greatest happiness of the greatest number'?"

"Such is our opinion," answers the petitioning plebeian.

"Well now, let us see what your principle involves. Suppose men to be, as they commonly are, at variance in their desires on some point ; and suppose that those forming the larger party will receive a certain amount of happiness each, from the adoption of one course, whilst those forming the smaller party will receive the same amount of happiness each, from the adoption of the opposite course ; then if 'greatest happiness' is to be our guide, it must follow, must it not, that the larger party ought to have their way?"

"Certainly."

"That is to say, if those who want what you do are a hundred, whilst those who want what I do are ninety-nine, your happiness must be preferred, should the individual amounts of gratification at stake on the two sides be equal."

"Exactly ; our axiom involves that."

"So then it seems that as, in such a case, you decide between the two parties by numerical majority, you assume that the happiness of a member of the one party, is equally important with that of a member of the other."

"Of course."

"Wherefore, if reduced to its simplest form, your doctrine turns out to be the assertion, that all men have equal claims to happiness ; or, applying it personally — that you have as good a right to happiness as I have."

"No doubt I have."

"And pray, sir, who told you that you have as good a right to happiness as I have?"

"Who told me?—I am sure of it; it is a manifest truth; I—"

"Nay, nay, that will not do. Give me your authority."

Whereupon, our petitioner is forced to confess, that he has no other authority but his own feeling—that he has simply an innate perception of the fact; or, in other words, that "his moral sense tells him so."

Whether it rightly tells him so, need not now be considered. All that demands present notice is the fact that, when cross-examined, even the disciples of Bentham have no alternative but to fall back on an intuition of this derided "moral sense," for the foundation of their own system.

But how, it may be asked, can a sentiment have a perception? how can an emotion give rise to a moral sense?

The objection seems a serious one; and were the term *sense* to be understood in its strict acceptance, would be fatal. But the word is in this case, as in many others, used to express that liking or aversion with which an emotional faculty comes to regard the deeds and objects it is related to; or rather that judgment which it causes the intellect to form of them. To elucidate this we must take an example.

Joined with the impulse to acquire property, there is what we call a *sense* of the value of property; and we find the vividness of this sense to vary with the strength of the impulse. Contrast the miser and the spendthrift. Accompanying his desire to heap up, the miser has a peculiar belief in the worth of money. The most stringent economy he thinks *virtuous*; and anything like ordinary liberality *vicious*; while of extravagance he has an absolute horror. Whatever adds to his store seems to him *good*: whatever takes from it, *bad*. And should a passing gleam of generosity

lead him to open his purse, he is pretty sure afterwards to reproach himself with having done *wrong*. Conversely, while the spendthrift is deficient in the instinct of acquisition, he also fails to realize the value of property; he has little *sense* of it. Hence, under the influence of other feelings, he regards saving habits as *mean*; and holds that there is something *noble* in profuseness. Now it is clear that these opposite *perceptions* of the propriety or impropriety of certain lines of conduct, do not originate with the intellect, but with the emotional faculties. The intellect, uninfluenced by desire, would show both miser and spendthrift that their habits were unwise; whereas the intellect, influenced by desire, makes each think the other a fool, but does not enable him to see his own folly.

This connexion is general. Every feeling is accompanied by a *sense* of the rightness of those actions which give it gratification—tends to generate convictions that things are good or bad, according as they bring to it pleasure or pain; and would always generate such convictions, were it unopposed. As, however, there are conflicts among the feelings, there results a proportionate incongruity in the beliefs—a similar conflict amongst these also. So that it is only where a desire is very predominant, or where no adverse desire exists, that this connexion between the instincts and the opinions they dictate, becomes distinctly visible.

Applied to the elucidation of the case in hand, these facts explain how from an *impulse* to behave in the way we call equitable, there will arise a *perception* that such behaviour is proper—a *conviction* that it is good. This instinct or sentiment, being gratified by a just action and distressed by an unjust action, produces in us an approbation of the one and a disgust towards the other; and these readily beget beliefs that the one is *virtuous* and the other *vicious*. Or, referring again to the illustration, we may say that as the desire to accumulate property is accompanied by a *sense* of the

value of property, so the desire to act fairly is accompanied by a *sense* of what is fair.

It will perhaps be needful here to meet the objection that whereas, according to the foregoing statement, each feeling tends to generate notions of the rightness or wrongness of actions towards which it is related ; and whereas morality should determine what is right throughout conduct at large, it is improper to confine the term "moral sense" to that which can afford directions in only one department. This is true. Nevertheless, seeing that our behaviour towards one another is the most important part of our behaviour, and that in which we are most prone to err ; seeing, also, that this same faculty is so purely and immediately moral in its function ; we may with some show of reason continue to employ that term with this restricted meaning.

Still it may be again urged that the alleged monitor is a worthless guide, because its dictates are unlike in different times and places.

To this the reply is, as before, that if such a guide is unfit, because its dictates are variable, then must Expediency also be rejected for the same reason. If Bentham is right in condemning Moral Sense, as an "anarchical and capricious principle, founded solely upon internal and peculiar feelings," then is his own maxim doubly fallacious. Is not the idea "greatest happiness," a capricious one? Is not that also "founded solely upon internal and peculiar feelings"? (See page 9.) And even were the idea "greatest happiness" alike in all, would not his principle be still "anarchical," in virtue of the countless disagreements as to the means of achieving this "greatest happiness"? All utilitarian philosophies are liable to this charge of indefiniteness, for there ever recurs the same unsettled question—what is utility?—a question which, as every newspaper shows us, gives rise to endless disputes, both as to the goodness of each desired end and

the efficiency of every proposed means. At the worst, therefore, in so far a want of scientific precision is concerned a philosophy founded on Moral Sense simply stands in the same category with all other known systems.

But happily there is an alternative. The force of the objection above set forth may be fully admitted, without in any degree invalidating the theory.

The error pointed out is not one of doctrine but of application. Those who committed it did not start from a wrong principle, but rather missed the right way from that principle to the sought-for conclusions. It was not in the oracle to which they appealed, but in their method of interpretation, that the writers of the Shaftesbury school erred. Confounding the functions of feeling and reason, they required a sentiment to do that which should have been left to the intellect. They were right in believing that there exists some governing instinct generating in us an approval of certain actions we call *good*, and a repugnance to certain others we call *bad*. But they were not right in assuming such instinct to be capable of intuitively solving every ethical problem submitted to it.

For the better explanation of this point, let us take an analogy from mathematics. The human mind takes cognizance of measurable quantity by a faculty which, to carry out the analogy, let us term a *geometric sense*. By the help of this we estimate the linear dimensions, surfaces, and bulks of surrounding objects, and form ideas of their relations to one another. But, in many cases, we find that little reliance can be placed on the unaided decisions of this geometric sense: its dicta are variable. On comparing notes, however, we discover that there are certain simple propositions upon which we all think alike, such as—"Things which are equal to the same thing are equal to one another;"—"The whole is greater than its part;"—and, agreeing upon these *axioms*, as we call them, we find it pos-

sible by successive deductions to settle all disputed points, and to solve complicated problems with certainty.<sup>1</sup> Now if, instead of adopting this method, geometers had persisted in determining all questions concerning lines, angles, squares, circles, and the like, by the geometric sense—if they had tried to discover whether the three angles of a triangle are, or are not, equal to two right angles, and whether the areas of similar polygons are, or are not, in the duplicate ratio of their homologous sides, by an effort of simple perception, they would have made the same mistake that moralists make, who try to solve all the problems of morality by the moral sense.

The reader will at once perceive the conclusion towards which this analogy points; namely, that as it is the office of the geometric sense to originate a geometric axiom, so it is the office of the moral sense to originate a moral axiom,

<sup>1</sup> Whether we adopt the views of Locke or of Kant as to the ultimate nature of what is here, for analogy's sake, called the geometric sense, does not affect the question. However originated, the fundamental perceptions attaching to it form the undecomposable bases of exact science. And this is all that is now assumed.

from which reason may develop a systematic morality.

And, varying the illustration, it may be further remarked that just as erroneous notions in mechanics—for instance, that large bodies fall faster than small ones, that water rises in a pump by suction, that perpetual motion is possible

formed by unaided *mechanical sense*, are set aside by the conclusions deduced from those primary laws of matter which the mechanical sense recognizes; so may we expect the multitudes of conflicting beliefs about human duty dictated by unaided *moral sense*, to disappear before the deductions scientifically drawn from some primary law of man which the moral sense recognizes.

[NOTE.—It should be remarked that though in this chapter there is recognition of the truth that the judgments of the moral sense are variable, the recognition is not adequate. The facts that some races of men appear to have no consciences at all and that in other races of men conscience gives verdicts quite unlike, and sometimes opposite to, the verdicts it gives among ourselves, are not even hinted. The evidences of this were not at that time before me. To prevent misapprehension it may be well here to say that the foregoing views concerning the moral sense are applicable only to races which have been long subject to certain kinds of discipline.]

## WHAT IS MORALITY?

It is manifest that the moral law must be the law of the perfect man—the law in obedience to which perfection consists. There are but two propositions for us to choose between. It may either be asserted that morality is a code of rules for the behaviour of men as they are; or, otherwise, that it is a code of rules for the behaviour of men as they *should* be. Of the first alternative we must say, that any proposed system of morals which recognizes existing defects,

and countenances acts made needful by them, stands self-condemned; seeing that, by the hypothesis, acts thus excused are not the best conceivable, that is, are not perfectly *right*—not perfectly *moral*, and therefore a morality which permits them, is, in so far as it does this, not a morality at all. To escape from this contradiction is impossible, save by adopting the other alternative; namely, that the moral law, ignoring all vicious conditions, defects, and

incapacities, prescribes the conduct of an ideal humanity. Pure rectitude can alone be its subject matter. Its object must be to determine the relations in which men *ought* to stand to one another—to point out the principles of action in a normal society. It must aim to give a systematic statement of those conditions under which human beings may harmoniously co-operate; and to this end it requires as its postulate, that such human beings be perfect.

Treating, therefore, as it does on the abstract principles of right conduct, a system of pure ethics cannot recognize evil, or any of those conditions which evil generates. It knows no such thing as an infraction of the laws, for it is merely a statement of what the laws are. It simply says, such and such are the principles on which men should act; and when these are broken it can do nothing but say that they *are* broken. If asked what ought any one to do when another has knocked him down, it will not tell: it can only answer that an assault is a trespass against the law, and gives rise to a wrong relation. It is silent as to the manner in which we should behave to a thief: all the information it affords is, that theft is a breach of rectitude. We may learn from it that debt implies an infraction of the moral code; but whether the debtor should or should not be imprisoned, cannot be decided by it. To all questions which presuppose some antecedent unlawful action, such as—should a barrister defend any one whom he believes to be guilty? Ought a man to break an oath which he has taken to do something wrong? Is it proper to publish the misconduct of our fellows?—the perfect law can give no reply, because it does not recognize the premises. In seeking to settle such points on purely ethical principles, moralists have attempted impossibilities. As well might they have tried to solve mathematically a series of problems respecting crooked lines and broken-backed curves, or to deduce from

the theorems of mechanics the proper method of setting to work a dislocated machine. No conclusions can lay claim to absolute truth but such as depend upon truths which are themselves absolute. A geometer requires that the straight lines with which he deals shall be veritably straight; and that his circles, and ellipses, and parabolas, shall agree with precise definitions. If you put to him a question in which these conditions are not complied with, he tells you that it cannot be answered. So likewise it is with the philosophical moralist. He treats solely of the *straight man*. He describes how the straight man comports himself; shows in what relation he stands to other straight men; shows how a community of straight men is constituted. A problem in which a *crooked man* forms one of the elements is insoluble by him. He may state what he thinks about it—may give an approximate solution; but anything more is impossible.

Or perhaps the point may be most conveniently enforced, by using the science of the animal man to illustrate that of the moral man. Physiology is defined as a classified statement of the phenomena of bodily life. It treats of the functions of our several organs in their normal states. It exhibits the mutual dependence of the vital actions; and describes the condition of things constituting perfect health. Disease it does not even recognize, and can therefore solve no question concerning it. To the inquiry—What is the cause of fever? or, what is the best remedy for a cold? it gives no answer. Such matters are out of its sphere. Could it reply it would be no longer Physiology, but Pathology or Therapeutics. Just so is it with a true morality, which might properly enough be called—Moral Physiology. Like its analogue, it has nothing to do with morbid actions and deranged functions. It deals only with the laws of a normal humanity, and cannot recognize a wrong, a depraved, or a disordered condition.

## THE EVANESCENCE [? DIMINUTION] OF EVIL

ALL evil results from the non adaptation of constitution to conditions. Does a shrub dwindle in poor soil, or become sickly when deprived of light, or die outright if removed to a cold climate? it is because the harmony between its organization and its circumstances has been destroyed. Those experiences of the farm-yard and the menagerie which show that pain, disease, and death, are entailed upon animals by certain kinds of treatment, may be similarly generalized. Every suffering incident to the human body, from a headache up to a fatal illness, from a burn or a sprain up to accidental loss of life, is similarly traceable to the having placed that body in a situation for which its powers did not fit it. Nor is the expression confined in its application to physical evil. Is the bachelor unhappy because his means will not permit him to marry? does the mother mourn over her lost child? does the emigrant lament leaving his fatherland? The explanation is still the same. No matter what the special nature of the evil, it is invariably referable to the one generic cause—want of congruity between the faculties and their spheres of action.

Equally true is it that evil perpetually tends to disappear. In virtue of an essential principle of life, this non-adaptation of an organism to its conditions is ever being rectified; and modification of one or both, continues until the adaptation is complete. Whatever possesses vitality, from the elementary cell up to man himself, inclusive, obeys this law. We see it illustrated in the acclimatization of plants, in the altered habits of domesticated animals, in the varying characteristics of our own race. Accustomed to the brief arctic summer, the Siberian herbs and shrubs spring up, flower, and ripen their seeds, in the space of a few weeks. If exposed to the rigour

of northern winters, animals of the temperate zone get thicker coats, and become white. The greyhound which, when first transported to the high plateaus of the Andes, fails in the chase from want of breath, acquires, in the course of generations, a more efficient pair of lungs.

Man exhibits the same adaptability. He alters in colour according to habitat—lives here upon rice and there upon whale oil—gets larger digestive organs if he habitually eats in nutritious food—acquires the power of long fasting if his mode of life is irregular, and loses it when the supply of food is certain—attains acute vision, hearing, and scent, when his habits of life call for them, and gets these senses blunted when they are less needful. That such changes are towards fitness for surrounding circumstances no one can question. When he sees that the dweller in marshes lives in an atmosphere which is certain death to a stranger—when he sees that the Hindoo can lie down and sleep under a tropical sun, while his white master with closed blinds, and water sprinklings, and punkah, can hardly get a doze—when he sees that the Greenlander and the Neapolitan subsist comfortably on their respective foods—blubber and macaroni, but would be made miserable by an interchange of them—when he sees that in other cases there is still this fitness to diet, to climate, and to modes of life, even the most sceptical must admit that some law of adaptation is at work. In the drunkard who needs an increasing quantity of spirits to intoxicate him, and in the opium eater who has to keep taking a larger dose to produce the usual effect, he may mark how the system gradually acquires power to resist what is noxious. Those who smoke, who take snuff, or who habitually use medicines, can furnish like illustrations.

This universal law of physical modification, is the law of mental modification

also. The multitudinous differences of capacity and disposition which have, in course of time, grown up between the Indian, African, Mongolian, and Caucasian races, and between the various subdivisions of them, must all be ascribed to the acquirement in each case of fitness for surrounding circumstances. Why all this divergence from the one original type ? If adaptation of constitution to conditions is not the cause, what is the cause ?

There are none, however, who can with anything like consistency combat this doctrine ; for all use arguments that presuppose its truth. They do this when they attribute differences of national character to differences in social customs and arrangements ; and again when they comment on the force of habit ; and again when they discuss the probable influence of a proposed measure upon public morality ; and again when they recommend practice as a means of acquiring increased aptitude ; and again when they describe certain pursuits as elevating and others as degrading ; and again when they talk of getting used to anything ; and again when they teach that virtuous conduct eventually becomes pleasurable, or when they warn against the power of a long-encouraged vice.

We must adopt one of three propositions. We must either affirm that the human being is unaltered by the influences brought to bear on him—his circumstances ; or that he tends to become unfitted to those circumstances ; or that he tends to become fitted to them. If the first be true, then all schemes of education, of government, of social reform are useless. If the second be true, then the way to make a man virtuous is to accustom him to vicious practices, and *vice versa*. Both of which propositions being absurd, we are compelled to admit the remaining one.

Keeping in mind these truths, that all evil results from the non-adaptation of constitution to conditions ; and that where this non-adaptation exists it is

continually being diminished by the changing of constitution to suit conditions ; we shall be prepared for comprehending the present position of the human race.

By the increase of population the state of existence we call social has been necessitated. Men living in this state suffer under numerous evils. By the hypothesis it follows that their characters are not completely adapted to such a state.

In what respect are they not so adapted ? what is the special qualification which the social state requires ?

It requires that each individual shall have such desires only, as may be fully satisfied without trenching upon the ability of other individuals to obtain like satisfactions. If the desires of each are not thus limited, then either all must have certain of their desires ungratified, or some must get gratification for them at the expense of others. Both of which alternatives, necessitating pain, imply non-adaptation.

But why is not man adapted to the social state ?

Simply because he yet partially retains the characteristics appropriate to an antecedent state. The respects in which he is not fitted to society, are the respects in which he is fitted for his original predatory life. His primitive circumstances required that he should sacrifice the welfare of other beings to his own ; his present circumstances require that he shall not do so ; and in so far as his old attribute still clings to him, he is unfit for the social state. All sins of men against one another, from the cannibalism of the Fijian to the crimes and venalities we see around us ; the felonies which fill our prisons, the trickeries of trade, the quarrellings of class with class and of nation with nation, have their causes comprehended under this generalization.

Man needed one moral constitution to fit him for his original state ; he needs another to fit him for his present state ; and he has been, is, and will

long continue to be, in process of adaptation. And the belief in human perfectibility merely amounts to the belief that, in virtue of this process, man will eventually become completely suited to his mode of life.

Progress, therefore, is not an accident, but a necessity. Instead of civilization being artificial it is a part of nature ; all of a piece with the development of an embryo or the unfolding of a flower. The modifications mankind have undergone, and are still undergoing, result from a law underlying the whole organic creation ; and provided the human race continues, and the constitution of things remains the same, those modifications must end in completeness. As surely as the tree becomes bulky when it stands alone, and slender if one of a group ; as surely as a blacksmith's arm grows large, and the skin of a labourer's hand thick ; as surely as the eye tends to become long-sighted in the sailor, and short-sighted in the student ; as surely as a clerk acquires rapidity in writing and calculation ; as surely as the musician learns to detect an error of a semitone amidst what seems to others a very babel

of sounds ; as surely as a passion grows by indulgence and diminishes when restrained ; as surely as a disregarded conscience becomes inert, and one that is obeyed active ; as surely as there is any meaning in such terms as habit, custom, practice ;—so surely must the human faculties be moulded into complete fitness for the social state ; so surely must evil and immorality disappear ; so surely must man become perfect.

[NOTE.—With the exception of small verbal improvements, I have let this chapter stand unaltered, though it is now clear to me that the conclusions drawn in it should be largely qualified. 1. Various races of mankind, inhabiting bad habitats, and obliged to lead miserable lives, cannot by any amount of adaptation be moulded into satisfactory types. 2. Astronomical and geological changes must continue hereafter to cause such changes of surface and climate as must entail migrations from habitats rendered unfit to fitter habitats ; and such migrations must entail modified modes of life, with consequent re-adaptations. 3. The rate of progress towards any adapted form must diminish with the approach to complete adaptation, since the force producing it must diminish ; so that, other causes apart, perfect adaptation can be reached only in infinite time.]

## GREATEST HAPPINESS MUST BE SOUGHT INDIRECTLY

It is for us to ascertain the *conditions* by conforming to which greatest happiness may be obtained. Unquestionably there must be in the nature of things some definite and fixed prerequisites to success. Man is a visible, tangible entity, having properties. In the circumstances which surround him there are unchanging necessities. Life depends on the fulfilment of certain functions ; and happiness is a particular

kind of life. Surely, then, if we would know how, in the midst of these circumstances, the being Man must live so as to achieve greatest happiness, we ought first to determine what the essential conditions are. To suppose that we may, in ignorance or disregard of them, succeed by some haphazard speculation, is folly. Only in one way can the *desideratum* be reached. What that one way is must depend on the fundamental

necessities of our position. And if we would discover it, our first step must be to ascertain those necessities.

At the head of them stands this unalterable fact—the social state. Men have multiplied until they are constrained to live more or less in presence of one another. That, as being needful for the support of the greatest sum of life, such a condition is preliminary to the production of the greatest sum of happiness, seems highly probable. Be that as it may, however, we find this state established ; are henceforth to continue in it ; and must therefore set it down as one of those necessities which our rules for the achievement of the greatest happiness must recognize and conform to.

In this social state the sphere of activity of each individual being limited by the spheres of activity of other individuals, it follows that the men who are to realize this greatest sum of happiness, must be men of whom each can obtain complete happiness within his own sphere of activity, without diminishing the spheres of activity required for the acquisition of happiness by others. For, manifestly, if each or any of them cannot receive complete happiness without lessening the spheres of activity of one or more of the rest, he must either himself come short of complete happiness, or must make one or more do so ; and hence, under such circumstances, the sum total of happiness cannot be as great as is conceivable, or cannot be greatest happiness. Here, then, is the first of those fixed conditions to the obtainment of greatest happiness, necessitated by the social state. It is the fulfilment of this condition which we express by the word *justice*.

To this all-essential pre-requisite there is a supplementary one of kindred nature. We find that without trenching upon one another's spheres of activity, men may yet behave to one another in such ways as to produce painful emotions. And if any have feelings which

lead them to do this, it is clear that the total amount of happiness is not so great as it would be were they devoid of those feelings. Hence, to compass greatest happiness, the human constitution must be such that each man may fulfil his own nature, not only without diminishing other men's spheres of activity, but without inflicting unhappiness on other men in any direct or indirect way. This condition, as we shall by-and-by see, needs to be kept quite distinct from the foregoing one. The observance of it may be called *negative beneficence*.

Yet another requirement there is by fulfilment of which the happiness flowing from compliance with the foregoing ones is indefinitely increased. Let a race of beings be so constituted that each may be able to obtain full satisfaction for all his desires, without deducting from the satisfactions obtainable by others, and we have a state of things in which the amount of *isolated* happiness is the greatest conceivable. But let these beings be so constituted that each, in addition to the pleasurable emotions personally received by him, can sympathetically participate in the pleasurable emotions of others, and the sum-total of happiness becomes largely augmented. Hence, to the primary requisite that each shall be able to get complete happiness without diminishing the happiness of the rest, we must now add the secondary one that each shall be capable of receiving happiness from the happiness of the rest. Compliance with this requisite implies *positive beneficence*.

Lastly, there must go to the production of the greatest happiness the further condition, that, whilst duly regardful of the preceding limitations, each individual shall perform all those acts required to fill up the measure of his own private happiness.

These, then, are necessities. They are not matters of opinion, but matters of fact. Denial of them is impossible, for nothing else can be stated but what is self-contradictory. Schemes of government and culture which ignore them,

cannot but be essentially absurd. Everything must be good or bad, right or wrong, in virtue of its accordance or discordance with them. Our whole code of duty is comprehended in the endeavour to live up to these necessities. If we find pleasure in doing this, it is well; if not, our aim must be to acquire that pleasure. Greatest happiness is obtained only when conformity to them is spontaneous; seeing that the restraint of desires inciting to trespass implies

pain, or deduction from greatest happiness. Hence it is for us to habituate ourselves to fulfil these requirements as fast as we can. The social state is a necessity. The conditions to greatest happiness under that state are fixed. Our characters are the only things not fixed. They, then, must be moulded into fitness for the conditions. And all moral teaching and discipline must have for its object to hasten this process.

## DERIVATION OF A FIRST PRINCIPLE

If men have like claims to that freedom which is needful for the exercise of their faculties, then must the freedom of each be bounded by the similar freedoms of all. When, in the pursuit of their respective ends, two individuals clash, the movements of the one remain free only in so far as they do not interfere with the like movements of the other. This sphere of existence into which we are thrown, not affording room for the unrestrained activity of all, and yet all possessing in virtue of their constitutions similar claims to such unrestrained activity, there is no course but to apportion the unavoidable restraint equally. Wherefore we arrive at the general proposition, that every man may claim the fullest liberty to exercise his faculties compatible with the possession of like liberty by every other man.

Upon a partial consideration this statement of the law will perhaps seem open to criticism. It may be thought better to limit the right of each to exercise his faculties, by the proviso that he shall not *hurt* any one else—shall not inflict *pain* on any one else. But although at

first sight satisfactory, this expression of the law allows of erroneous deductions. It is true that men, who fulfil those conditions to greatest happiness set forth in the foregoing chapter, cannot exercise their faculties to the aggrieving of one another. It is not, however, that each avoids giving pain by restraining from the full exercise of his faculties; but it is that the faculties of each are such that the full exercise of them offends no one. And herein lies the difference. The giving of pain may have two causes. Either the abnormally-constituted man may do something displeasing to the normal feelings of his neighbours, in which case he acts wrongly; or the behaviour of the normally-constituted man may irritate the abnormal feelings of his neighbours, in which case it is not his behaviour that is wrong, but their characters that are so. Under such circumstances the due exercise of his faculties is right, although it gives pain; and the remedy for the evil lies in the modification of those abnormal feelings to which pain is given.

To elucidate this distinction let us take a few illustrations. An honest man

discovers some friend, of whom he had previously thought well, to be a rogue. He has certain high instincts to which roguery is repugnant ; and, allowing free play to these, he drops the acquaintanceship of this unworthy one. Now, though in doing so he gives pain, it does not follow that he transgresses the law. The evil must be ascribed, not to an undue exercise of faculties by him, but to the immorality of the man who suffers. Again, a Protestant in a Roman Catholic country refuses to uncover his head on the passing of the host. In so obeying the promptings of certain sentiments, he annoys the spectators ; and were the above modified expression of the law correct, would be blameable. The fault, however, is not with him, but with those who are offended. It is not that he is culpable in thus testifying to his belief, but it is that they ought not to have so tyrannical an intolerance of other opinions than their own. Or again, a son, to the great displeasure of his father and family, marries one who, though in all respects admirable, is dowerless. In thus obeying the dictates of his nature, he may entail considerable distress of mind on his relatives ; but it does not follow that his conduct is bad ; it follows, rather, that the feelings which his conduct has wounded are bad.

Hence we see that in hourly-occurring cases like these, to limit the exercise of faculties by the necessity of not giving pain to others, would be to stop the proper exercise of faculties in some persons, for the purpose of allowing the improper exercise of faculties in the rest. Moreover, the observance of such a rule does not, in reality, prevent pain. For though he who is restrained by it avoids inflicting suffering on his fellows, he does so at the expense of suffering to himself. The evil must be borne by some one, and the question is by whom. Shall the Protestant, by showing reverence for what he does not revere, tell a virtual lie, and thus do violence to his conscientious feeling that he may avoid vexing the intolerant spirit of his Catholic

neighbours ? or shall he give the rein to his own healthy sincerity and independence, and offend their unhealthy bigotry ? Shall the honest man repress those sentiments that make him honest, lest the exhibition of them should give pain to a rogue ? or shall he respect his own nobler feelings, and hurt the other's baser ones ? Between these alternatives no one can well pause. And here indeed we get down to the root of the matter. For be it remembered the universal law of life is, that the exercise or gratification of faculties strengthens them ; while, contrariwise, the curbing or inflicting pain on them, entails a diminution of their power. And hence it follows that when the action of a normal faculty is checked, to prevent pain being given to the abnormal faculties of others, those abnormal faculties remain as active as they were, and the normal one becomes weaker or abnormal. Whereas under converse circumstances the normal one remains strong, and the abnormal ones are weakened, or made more normal. In the one case the pain is detrimental, because it retards the approximation to that form of human nature under which the faculties of each may be fully exercised without displeasure to the like faculties of all. In the other case the pain is beneficial, because it aids the approximation to that form. Thus, that first expression of the law which arises immediately from the conditions to social existence, turns out to be the true one : any such modification of it as the above necessitating conduct that is in many cases mischievous.

And yet, on the other hand, when we seek to express the law by saying that every man has full liberty to exercise his faculties, provided always he does not trench upon the similar liberty of any other, we commit ourselves to an imperfection of an opposite character ; and we find that there are many cases in which the above modified expression answers better. Various ways exist in which the faculties may be exercised to the aggrieving of other persons, without

the law of equal freedom being overstepped. A man may behave unamiously, may use harsh language, may annoy by disgusting habits ; and whoso thus offends the normal feelings of his fellows, manifestly diminishes happiness. If we say that every one is free to exercise his faculties so long only as he does not inflict pain upon any one else, we forbid all such conduct. Whereas if we simply limit the liberty of each by the like liberties of all, we do not forbid it ; seeing that he who exercises his faculties in this way, does not hinder others from exercising theirs in the same way, and to the same extent. How, then, are we to escape from this difficulty? Neither statement of the law quite fulfils our requirement, and yet we must choose one of them. Which must it be, and why?

It must be the original one, and for a very good reason. Limiting the liberty of each by the like liberties of all excludes a wide range of improper actions, but does not exclude certain other improper ones. Limiting the liberty of each by the necessity of not giving pain to the rest, excludes the whole of these improper actions, but excludes along with them many others that are proper. The one does not cut off enough ; the other cuts off too much. The one is negatively erroneous ; the other is positively so. Evidently, then, we must adopt the negatively erroneous one, seeing that its shortcomings may be made good by a supplementary law. And here we find the need for that distinction lately drawn between *justice* and *negative beneficence*. Justice imposes upon the exercise of faculties a primary series of limitations, which is strictly true as far as it goes. Negative beneficence imposes a secondary series. It is no defect in the first of these that it does not include the last. The two are, in the main, distinct ; and, as we have just seen, the attempt to unite them under one expression leads us into fatal errors.

Yet another objection will probably be

started. By full liberty to exercise the faculties, is meant full liberty to do all that the faculties prompt, or, in other words, to do all that the individual wills ; and it may be said that if the individual is free to do all that he wills, provided he does not trespass upon certain specified claims of others, then he is free to do things which are injurious to himself—is free to get drunk, for instance. To this it must in the first place be replied, as above, that while the law now laid down forbids a certain class of actions as immoral, it does not recognize all kinds of immorality—that the restriction it puts on the free exercise of faculties, though the chief, is not the sole restriction, and must be received without prejudice to further ones. Of the need for such further ones, the difficulty here raised furnishes a second instance.

Mark now, however, that these supplementary restrictions are of inferior authority to the original law. Instead of being, like it, capable of scientific development, they can be unfolded only into superior forms of expediency. The limit put to each man's freedom by the like freedom of every other man, is a limit almost always possible of ascertainment ; for the respective amounts of freedom men assume can usually be compared, and the equality or inequality of those amounts recognized. But when we set about drawing practical deductions from the propositions that a man is not at liberty to do things injurious to himself, and that he is not at liberty (except in cases like those lately cited) to do what may give unhappiness to his neighbours, we find ourselves involved in complicated estimates of pleasures and pains, to the obvious peril of our conclusions. For example, though it is manifest that to get drunk is an injurious exercise of faculties, it is by no means manifest how much work is proper for us, and when work becomes detrimental ; it is by no means manifest where lies the line between due and undue intellectual activity ; it is by no means manifest what

amount of advantage will justify a man in submitting to unsuitable climate and mode of life; and yet in each of these cases happiness is at stake, and the wrong course is wrong for the same reason that drunkenness is so. Even were it possible to say of each private action whether the resulting gratification did or did not preponderate over the resulting suffering, there would still present itself this second difficulty, that we cannot in all cases distinguish suffering which is detrimental, from suffering which is beneficial. While we are as yet imperfectly adapted to our conditions, pain must inevitably arise from the repression of faculties that are too active, and from the overtasking of those that are not equal to their duties; and, as being needful to the development of the ultimate man, such pain cannot be held dammatory of the actions causing it. Thus, referring again to the instances just cited, it is evident that the ability to work is needful for the production of the greatest happiness; but the acquirement of this ability by the uncivilized man is so distressing, that only severe discipline will force him to it. The degree of intelligence which our existing mode of life necessitates, cannot be arrived at without ages of wearisome application, and perhaps cannot get organized in the race without a partial and temporary sacrifice of bodily health. Here, then, are cases in which men's liberties must not be limited by the necessity of not inflicting pain on themselves; seeing that it cannot be so limited without a suspension of our approach to greatest happiness. Similarly, we saw that there are cases in which, for the same reason, men's liberties must not be limited by the necessity of not inflicting pain on others. And the fact now to be noticed is, that we possess no certain way of distinguishing the two groups of cases thus exemplified, from those cases in which the doing what diminishes happiness, either in ourselves or others, is both immediately and ultimately detrimental, and therefore wrong.

As both of these supplementary limitations involve the term *happiness*, and as happiness is for the present capable only of a generic and not of a specific definition, they do not admit of scientific development.

And now we have arrived at an important truth touching this matter—the truth that only by exercise of this liberty of each, limited alone by the like liberties of all, can there arise a separation of those acts which, though incidentally and temporarily injurious to ourselves or others, are indirectly beneficial, from those acts which are necessarily and permanently injurious. For manifestly, all non-adaptation of faculties to their functions must consist either in excess or defect. Manifestly, too, in the wide range of cases we are now treating of, there exists no mode but a tentative one of distinguishing that exercise of faculties which produces suffering because it oversteps the conditions to normal existence, from that other exercise of faculties which produces suffering because it falls short of those conditions. And manifestly, the due employment of this tentative mode requires that each man shall have the greatest freedom compatible with the like freedom of all others.

That, on this course being pursued, there will happen a gradual cessation of the detrimentally painful actions, while the beneficially painful ones will be continued until they have ceased to be painful, may be made clear by a few illustrations. Thus, the change from the impulsive nature of the savage to that nature which enables the civilized man to sacrifice a present gratification for a future greater one, involves much suffering; but the necessities of social life demanding such a change, and continually visiting the lack of self-restraining power with punishment, ensure a constant though irksome endeavour on the part of all to acquire this power—an endeavour which must surely though slowly succeed. Conversely, the prevalence of a some-

what undue desire for food, entailing as it does unpleasant results, brings about such attempts at abstemiousness as must, by constantly curbing it, finally reduce this desire to normal intensity.<sup>1</sup> And what so manifestly happens in these simple cases, will happen in those complex ones above exemplified, where the good and bad results are more nearly balanced. For although it may be impossible in such cases for the intellect to estimate the respective amounts of pleasure and pain consequent on each alternative, yet will experience enable *the constitution itself* to do this; and will further cause it instinctively to shun that course which produces on the whole most suffering, or, in other words—most sins against the necessities of existence, and to choose that which least sins against them. Turning to those actions which put us in direct relation to other men, it must similarly happen that such of them as give no necessary displeasure to any one, will be persevered in, and the faculties answering to them developed; while actions necessarily displeasing to others, must, by virtue of the disagreeable reactions which they entail, be, in the average of cases, subject to some repression—a repression which must ultimately tell upon the desires they spring from. And now observe that in the course of this process there must continually be produced a different effect upon conduct which is *necessarily* painful to others, from that produced upon conduct that is *incidentally* painful only. Conduct which hurts *necessary* feelings in others will, as just explained, inevitably undergo restraint and consequent diminution. Conduct which hurts

<sup>1</sup> Why the appetite for food should now be greater than is proper, seems at first difficult to understand. On calling to mind, however, the circumstances of the savage, we find an explanation in the fact, that the irregularity in his supplies of food necessitated an ability to eat largely when food was attainable, and necessitated, therefore, a corresponding desire. Now that the supplies of food have become regular, and no contingent periods of long fasting have to be provided against, the desire is in excess and has to be abated.

only their *incidental* feelings, as those of caste, or prejudice, will not inevitably do so; but if it springs from necessary feelings, will be continued at the expense of these incidental feelings, and to the final suppression of them. Thus, the existing confusion of necessary and conventional feelings, necessary and conventional circumstances, and feelings and circumstances that are partly necessary and partly conventional, will eventually work itself clear.

If, then, the one thing needful to produce ultimate subordination to these secondary limits of right conduct is, that we should have the opportunity of coming in contact with them—should be allowed freely to expand our natures in all directions, until the available space has been filled and the true bounds have made themselves felt—if a development of these secondary limits into practical codes of duty can only thus be accomplished; then does the supreme authority of our first law—the liberty of each limited alone by the like liberties of all—become still more manifest: seeing that that right to exercise the faculties which it asserts, must precede the unfolding of this supplementary morality.

Nevertheless, it must still be admitted that in cases where the secondary limitations to the exercise of the faculties are undoubtedly transgressed, the full assertion of this law of equal freedom betrays us into an apparent dilemma. By drunkenness, or by brutality of manner, our own happiness, or the happiness of others is diminished; and that not in an incidental but in a necessary way. And if by affirming a man's liberty to do all that he wills so long as he respects the like liberty of every other, we imply that he is at liberty to get drunk or to behave brutally, then we fall into the inconsistency of affirming that he is at liberty to do something essentially destructive of happiness.

Of this difficulty nothing can be said save that it seems due to the impossibility of making the perfect law recognize all

imperfect state. As matters stand, however, we must deal with it as best we may. There is clearly no alternative but to declare man's freedom to exercise his faculties. There is clearly no alternative but to declare the several limitations of that freedom needful for the achievement of greatest happiness. And there is clearly no alternative but to develop the first and chief of these limitations separately; seeing that a development of the others is at present impossible. Against the consequence of neglecting these secondary limitations, we must guard ourselves as well as we can: supplying the place of scientific deductions by such inferences as observation and experience enable us to make.

Finally, however, there is satisfaction

in the thought, that no such imperfection as this can vitiate any of the conclusions we are now about to draw. Liberty of action being the first essential to exercise of faculties, and therefore the first essential to happiness; and the liberty of each limited by the like liberties of all, being the form which this first essential assumes when applied to many instead of one: it follows that this liberty of each, limited by the like liberties of all, is the rule in conformity with which society must be organized. Freedom being the pre-requisite to normal life in the individual, equal freedom becomes the pre-requisite to normal life in society. And if this law of equal freedom is the *primary* law of right relationship between man and man, then no desire to get fulfilled a *secondary* law can warrant us in breaking it.

## SECONDARY DERIVATION OF A FIRST PRINCIPLE

THIS first and all-essential law, declaratory of the liberty of each limited only by the like liberties of all, is that fundamental truth of which the moral sense gives an intuition, and which the intellect has to develop into a scientific morality.

Quite independently of any such analytical examination as that just concluded, men perpetually exhibit a tendency to assert the equality of human rights. In all ages, but more especially in later ones, has this tendency been visible. In our own history we may detect it as early as the time of Edward I., in whose writs of summons it was said to be "a most equitable rule, that what concerns all should be approved of by all." How our institutions have been influenced by it may be seen in the judicial principle that "all men are equal

before the law." The doctrine that "all men are naturally equal" (of course not in their faculties, but only in their *claims* to make the best use of their faculties) has not only been asserted by philanthropists like Granville Sharpe, but, as Sir Robert Filmer, a once-renowned champion of absolute monarchy, tells us, "Heyward, Blackwood, Barclay, and others that have bravely vindicated the right of kings, . . . with one consent admitted the natural liberty and equality of mankind." In his essay on Civil Government Locke, too, expresses the opinion that there is "nothing more evident than that creatures of the same species and rank, promiscuously born to the same advantages of nature, and the use of the same faculties, should also be equal one amongst another without sub-

ordination or subjection." Again, we find the declaration of American independence affirming that "all men have equal rights to life, liberty, and the pursuit of happiness." And those who wish for more authorities who have expressed the same conviction, may add the names of Judge Blackstone and "the judicious Hooker."

The sayings and doings of daily life continually imply some intuitive belief of this kind. We take for granted its universality when we appeal to men's sense of justice. It shows itself in such expressions as—"How would you like it?" "I've as good a right as you," &c. Nay, indeed, so spontaneous is this faith in the equality of human rights, that our very language embodies it. *Equity* and *equal* are from the same root; and equity literally means *equalness*.

Not without meaning is the continued life and growth of this conviction. He must indeed have a strange way of interpreting social phenomena, who can believe that the reappearance of it, with increasing frequency, in law, books, agitations, revolutions, means nothing. If we analyze them, we shall find all beliefs to be in some way dependent on mental conformation temporary ones upon temporary characteristics of our nature—permanent ones on its permanent characteristics. And when we find that a belief like this in the equal freedom of all men, is not only permanent but daily gaining ground, we have good reason to conclude that it corresponds to some essential element of our moral constitution: more especially since we find that its existence is in harmony with that chief pre-requisite to greatest happiness lately dwelt upon; and that its growth is in harmony with that law of adaptation by which this greatest happiness is being wrought out.

Such, at least, is the hypothesis here adopted. From the above accumulation of evidence it is inferred that there exists in man what may be termed an *instinct of personal rights*—a feeling that leads him to claim as great a share of natural privilege as is claimed by others—a feel-

ing that leads him to repel anything like an encroachment upon what he thinks his sphere of original freedom. By virtue of this impulse, individuals as units of the social mass, tend to assume like relationships with the atoms of matter; surrounded as these are by their respective atmospheres of *repulsion* as well as of attraction. And perhaps social stability may ultimately be seen to depend on the due balance of these forces.

But why, it may be asked, should there need any sentiment leading men to claim the liberty of action requisite for the due exercise of faculties, and prompting them to resist encroachments upon that liberty? Will not the several faculties themselves do this, by virtue of their desires for activity, which cannot otherwise be gratified? Surely there is no necessity for a special impulse to make a man do that which all his impulses conjointly tend to make him do.

This is not so serious an objection as it appears to be. For although, were there no such sentiments as this supposed one, each faculty in turn might impel its possessor to oppose a diminution of its own sphere of action, yet, during the dormancy of that faculty, there would be nothing to prevent the freedom requisite for its *future* exercise from being infringed upon. It may, perhaps, be rejoined, that the mere consciousness that there must again happen occasions for the use of such freedom will constitute a sufficient incentive to defend it. But plausible as this supposition looks, it does not tally with facts. We do not find on inquiry, that each faculty has a special foresight. We find, on the contrary, that to provide for the future gratification of the faculties at large, is the office of faculties existing solely for that purpose. Thus, referring once more by way of illustration to the acquisitive instinct, we see that, when this is wanting, the desires for food, for clothing, for shelter, together with those many other desires which property ministers to, do not of themselves prompt that accumulation of property

on which the continuance of their satisfactions depends. Each of them, when active, impels the individual to take means for its present fulfilment, but does not prompt him to lay by the means for its future fulfilment. Similarly, then, with liberty of action. It is argued that as each faculty does not look after its own particular fund of necessities, so neither does it look after its own particular sphere of activity; and that as there is a special faculty to which the providing of a general fund of necessities is consigned, so likewise is there a special faculty to which the maintenance of a general sphere of activity is consigned.

Seeing, however, that this instinct of personal rights is a purely selfish instinct, leading each man to assert and defend his own liberty of action, there remains the question—Whence comes our perception of the rights of others?

The way to a solution of this difficulty has been opened by Adam Smith in his *Theory of Moral Sentiments*. It is the aim of that work to show that the proper regulation of our conduct to one another, is secured by means of a faculty whose function it is to excite in each being the emotions displayed by surrounding ones—a faculty which awakens a like state of sentiment, or, as he terms it, “a fellow-feeling with the passion of others”—the faculty, in short, which we commonly call Sympathy. As illustrations of the mode in which the agent acts, he cites cases like these:—

“Persons of delicate fibres, and weak constitution of body, complain that in looking on the sores and ulcers which are exposed by beggars in the streets, they are apt to feel an itching or uneasy sensation in the corresponding part of their own bodies.” “Men of most robust make observe, that in looking upon sore eyes they often feel a very sensible soreness in their own.” “Our joy for the deliverance of those heroes of tragedy or romance who interest us, is as sincere as our grief for their distress,

and our fellow-feeling for their misery is not more real than that for their happiness.” “We blush for the impudence and rudeness of another, though he himself appears to have no sense of the impropriety of his behaviour.”

To these facts cited by Adam Smith, may be added many others of like import; such as that people—women especially—start or shriek on seeing an accident occur to others; that unpractised assistants at surgical operations often faint; that out of the soldiers drawn up to witness a flogging, usually several drop down in the ranks; that a boy has been known to die on witnessing an execution. We have all experienced the uncomfortable feeling of shame produced in us by the blunders and confusion of a nervous speaker; and probably every one has, some time or other, been put into a horrible tremor on seeing a person at the edge of a precipice. The converse action of the faculty is equally observable. Thus, we find ourselves unable to avoid joining in the lamentation of our friends, while unaware of its cause; and children, much to their annoyance, are often forced to laugh in the midst of their tears, by witnessing the laughter of those around them. These and many like evidences prove that, as Burke says, “sympathy must be considered as a sort of substitution by which we are put into the place of another man, and affected in many respects as he is affected.”

In tracing our benevolent actions to the influence of such a faculty—in concluding that we are led to relieve the miseries of others from a desire to rid ourselves of the pain given by the sight of misery, and to make others happy because we participate in their happiness—Adam Smith puts forth what seems to be a quite satisfactory theory. But he has overlooked one of its most important applications. Not recognizing any such impulse as that which urges men to maintain their claim, he did not see that their respect for the claims of others, may be explained in the same

ray. He did not perceive that the sentiment of justice is nothing but a sympathetic affection of the instinct of personal rights—a sort of reflex function of it. Such, however, must be the case, if that instinct exists, and if this hypothesis of Adam Smith be true. Here lies the explanation of those qualms of conscience, as we call them, felt by men who have committed dishonest actions. It is through this instrumentality that we receive satisfaction on paying another what is due to him. And with these two faculties also, originates that indignation which narratives of political oppression excite in us.

It was elsewhere hinted (p. 22) that though we must keep up the distinction between them, it is nevertheless true that *justice* and *beneficence* have a common root; and the reader will now at once perceive that the common root is Sympathy. All the actions properly classified under the one, and which we describe as fair, equitable, upright, spring from the sympathetic excitement of the instinct of personal rights; while those usually grouped under the other, as mercy, charity, good-nature, generosity, amiability, considerateness, are due to the action of Sympathy upon one or more of the other feelings.

If it be true that men's perceptions of justice are generated in the way alleged, it will follow that, other things equal (*i.e.*, if there are equal amounts of sympathy), those who have the strongest sense of their own rights, will have the strongest sense of the rights of their neighbours. And, by observing whether this is the case or not, we may put the theory to the proof. Let us do this.

The first illustration that suggests itself is afforded by the Society of Friends. Ever since they appeared in the days of Charles I, the members of that body have been remarkable for their determined assertion of personal liberty. They have shown it in their continued resistance to ecclesiastical power; in the obstinacy with which

they successfully defied persecution; in their still-continued refusal to pay church-rates; and even in their creed, which does not permit a priesthood. Observe, now, how the sentiments which these peculiarities imply has manifested itself sympathetically. Penn and his followers were the only emigrants of their age who made any acknowledgment to the aborigines for the land they colonized. This same sect furnished sundry of the philanthropists who set up the agitation for abolishing the slave trade, and were most energetic in carrying it on. Among lunatic asylums, the York Retreat was one of the first, if not *the* first, in which a non-coercive treatment of the insane was adopted. They were Quakers, too, who years ago began publicly to proclaim against the injustice as well as the cruelty of war. And, while it may be true that in business they are firm in the assertion of their claims, it is not less true that on the whole they are remarkable for honest dealing.

Conversely, we find that those who have not a strong sense of what is just to themselves, are likewise deficient in a sense of what is just to their fellow men. This has long been a common remark. As one of our living writers puts it—the tyrant is nothing but a slave turned inside out. In earlier days, when feudal lords were vassals to the king, they were also despots to their retainers. In our own time, the Russian noble is alike a serf to his autocrat and an autocrat to his serf. It is remarked, even by schoolboys, that the bully is the most ready of all to knock under to a bigger bully. We constantly observe that those who fawn upon the great are overbearing to their inferiors. That "emancipated slaves exceed all other owners (of slaves in cruelty and oppression),"<sup>1</sup> is a truth established by numerous authorities.

One qualification must be made, however. There is no *necessary* connexion between a sense of what is due to self and a sense of what is due to others. Sympathy and instinct of rights do no

<sup>1</sup> *Four Years in the Pacific.* By Lieut. Walpole

always co-exist in equal strength any more than other faculties do. Either of them may be present in normal amount while the other is almost wanting. And, if devoid of sympathy, it is possible for a man who has a sufficient impulse to assert his own claims, to show no corresponding respect for the claims of his fellows. The instinct of rights being of itself entirely selfish, merely impels its possessor to maintain his own rights. Only by the sympathetic excitement of it, is a desire to behave equitably to others awakened; and when sympathy is absent such a desire is impossible.

Further proof may be found in the fact, that some of the peculiar moral notions traceable to these sentiments are perfectly in harmony with certain of the abstract conclusions arrived at in the preceding chapter. We find in ourselves a conviction, for which we can give no satisfactory reason, that we are free, if we please, to do particular things which it is yet blameable to do. Though it may greatly diminish his happiness, a man feels that he has a *right*, if he likes, to cut off a finger, or to destroy his property. While we condemn the want of consideration he shows towards some miserable debtor, we yet admit that the hard creditor is, in *strict justice*, entitled to the utmost farthing. Notwithstanding our disgust at the selfishness of one who refuses to afford some friendly accommodation, we cannot deny that he is quite *at liberty* to refuse. Now these perceptions which, if the hypothesis be true, are referable to the instinct of personal rights, acting in the one case directly and in the other cases sympathetically, quite accord with foregoing inferences. We found that the law of equal freedom is the fundamental law. We found (p. 24) that no other limitations of activity could be as authoritative as that which it sets up. And we found further (p. 25) that in this, our state of adaptation, it would be wrong to establish any fixed boundary to the liberty of *each*, save the similar liberties of others.

Such a correspondence between our instinctive beliefs and the conclusions previously arrived at, lends additional probability to the hypothesis here advanced.

There exists, however, a dominant set of politicians who treat with contempt this belief that men have any claims antecedent to those created by governments. As disciples of Bentham, consistency requires them to do this. Accordingly, although it does violence to their secret perceptions, they boldly deny the existence of "rights" entirely. Practically, if not professedly, they hold, with Thrasymachus, that nothing is intrinsically right or wrong, but that it becomes either by the dictum of the State. If we are to credit them, government determines what shall be morality, and not morality what shall be government. They believe in no oracular principle by whose yea or nay we may be guided: their Delphi is the House of Commons. By their account man lives and moves and has his being by legislative permit. His freedom to do this or that is not natural, but conferred. The question—Has the citizen any claim to the work of his hands? can be decided only by a parliamentary division. If "the ayes have it," he has; if "the noes," he has not. Nevertheless they perpetually betray a belief in the doctrines which they professedly reject. They inadvertently talk about *justice*, especially when it concerns themselves in much the same style as their opponents. They draw the same distinction between *law* and *equity* that other people do. And when robbed or assaulted, or wrongfully imprisoned, they exhibit the same indignation, the same determination to oppose the aggressor, utter the same denunciations of tyranny, and the same loud demands for redress, as the sternest assertors of the rights of man.

But it is amusing when, after all, it turns out that the ground on which these philosophers have taken their

stand, and from which with such self-complacency they shower their sarcasms, is nothing but an adversary's mine, destined to blow the vast fabric of conclusions they have based on it into nonentity. This so solid-looking principle of "the greatest happiness of the

greatest number," needs but to have a light brought near it, and lo ! it explodes into the astounding assertion, that all men have equal rights to happiness (p. 14)—an assertion far more sweeping and revolutionary than any of those which are assailed with so much scorn.

## FIRST PRINCIPLE

THUS are we brought by several routes to the same conclusion. Whether we reason our way from those fixed conditions under which alone greatest happiness can be realized--whether we draw our inferences from man's constitution, considering him as a congeries of faculties--or whether we listen to the monitions of a certain mental agency, which seems to have the function of guiding us in this matter; we are alike taught, as the law of right social relationships, that—*Every man has freedom to do all that he wills, provided he infringes not the equal freedom of any other man.* Though further qualifications of the liberty of action thus asserted are necessary, yet we have seen that in the just regulation of a community no further qualifications of it can be recognized. Such further qualifications must remain for private and individual application. We must therefore adopt this law of equal freedom in its entirety, as the law on which a correct system of equity is to be based.

Some will, perhaps, object to this first principle, that being in the nature of an axiomatic truth--standing towards the inferences to be drawn from it in the position of one, it ought to be recognized by all; which it is not.

Respecting the fact thus alleged, that there have been, and are, men impervi-

ous to this first principle, there can be no question. Probably it would have been dissented from by Aristotle, who considered it a "self-evident maxim that nature intended barbarians to be slaves." Cardinal Julian, who "abhorred the impiety of keeping faith with infidels," might possibly have disputed it. It is a doctrine which would scarcely have suited the abbot Guibert, who, in his sermons, called the free cities of France "those execrable communities, where serfs, against law and justice, withdraw themselves from the power of their lords." And perhaps the Highlanders, who in 1748 were reluctant to receive their freedom on the abolition of the heritable jurisdictions, would not have admitted it. But the confession that the truth of this first principle is not self-evident to all, by no means invalidates it. The Bushman can count only as high as three; yet arithmetic is a fact, and we have a Calculus of Functions by the aid of which we find new planets. As, then, the disability of the savage to perceive the elementary truths of number is no argument against their existence, and no obstacle to their discovery and development; so, the circumstance that some do not see the law of equal freedom to be an elementary truth of ethics, does not disprove the statement that it is one.

So far indeed is this difference in men's moral perceptions from being a difficulty in our way, that it serves to illustrate a doctrine already set forth. As already explained, man's original circumstances "required that he should sacrifice the welfare of other beings to his own"; whereas his present circumstances require that "each individual shall have such desires only as may be fully satisfied without trenching upon the ability of other individuals to obtain like satisfactions." And it was pointed out that, in virtue of the law of adaptation, the human constitution is changing from the form which fitted it to the first set of conditions to a form fitting it for the last. Now it is by the growth of those two faculties which together originate what we term a Moral Sense, that fitness for these last conditions is secured. In proportion to the strengths of sympathy and the instinct of personal rights, will be the impulse to conform to the law of equal freedom. And in the mode elsewhere shown (p. 15), the impulse to conform to this law will generate a correlative belief in it. Only, therefore, after the process of adaptation has made considerable advance, can there arise either subordination to this law or a perception of its truth. And hence any general recognition of it during the earlier stages of social development must not be looked for.

To the direct evidence which has been accumulated in proof of our first principle, may now be added indirect evidence furnished by the absurdities into which denial of it betrays us. He who asserts that the law of equal freedom is not true, that is, he who asserts that men have *not* equal rights, has two alternatives. He may either say that men have no rights at all, or that they have unequal rights. Let us examine these positions.

Foremost of those who deny rights altogether, stands that same Sir Robert Filmer already named, with his dogma that "men are not naturally free."

Starting thus, he readily finds his way to the conclusion that the only proper form of government is an absolute monarchy. For, if men are not naturally free, that is, if men have naturally no rights, then, he only has rights to whom they are specially given by God. From which inference to "the divine right of kings" is an easy step. It has become manifest in later times, however, that this divine right of kings, means the divine right of any one who can get uppermost. For since, according to its assertors, no man can be supposed to occupy the position of supreme ruler in opposition to the will of the deity, it follows that whoever attains to that position, whether by fair means or by foul, be he legitimate or be he usurper, has divine authority on his side. So that to say "men are not naturally free," is to say that though men have no rights, yet whoever can get power to coerce the rest has a right to do so!

For espousing the other alternative, namely, that men's rights are unequal, the assigned motive is a desire to ensure supremacy of the best. But even were it admitted that, to ensure supremacy of the best, liberty of action should be apportioned to men in the ratios of their merits, there remains the question - how are relative merits to be determined? We cannot appeal to public opinion, for it is not uniform. And were it uniform there is no reason to think that it would be correct. Can confidence be placed in the judgments of men who subscribe Hudson-testimonials, and yet leave the original projector of railways to die in poverty? Are those fit to decide on comparative greatness who have erected half-a-dozen public monuments to Wellington and none to Shakespeare or Newton?—an authority which awards to the door-keeper of its House of Commons £74 a year more than to its astronomer royal?

If, then, public opinion is so fallible a test of relative merits, where shall a trustworthy test be found? Clearly, if the freedom to which each is entitled

varies with his worth, some satisfactory mode of estimating worth must be discovered before any settlement of men's right relationships can become possible. Who will point out such a mode?

Even were a still further admission made—even were we to assume that men's respective claims could be fairly rated—it would still be impossible to reduce the theory of unequal rights to practice. We should yet have to find a rule by which to allot these different shares of privilege. Where is the scale that would enable us to mark off the portion proper for each individual? Sup-

posing a shopkeeper's rights to be symbolized by ten and a fraction, what number will represent those of a doctor? What multiple are the liberties of a banker of those of a seamstress? Given two artists, one half as clever again as the other, it is required to find the limits within which each may exercise his faculties. As the greatness of a prime minister is to that of a ploughboy, so is full freedom of action to—the desired answer. Here are a few out of numberless like questions. When a method of solving them has been found, it will be time enough to reconsider the theory of unequal rights.

## APPLICATION OF THIS FIRST PRINCIPLE

THE process by which we may develop this first principle into a system of equity is sufficiently obvious. We shall have to consider of every deed, whether in committing it, a man does, or does not, trespass on the freedom of his neighbour—whether, when placed side by side, the shares of liberty the two respectively assume are equal. And by thus separating that which can be done by each without trenching on the liberties of others, from that which cannot be so done, we may classify actions into lawful and unlawful.

Difficulties may now and then occur in the performance of this process. We shall occasionally find ourselves unable to decide whether a given action does or does not trespass against the law of equal freedom. But such an admission by no means implies any defect in that law. It merely implies human incapacity—an incapacity which puts a limit to our discovery of physical truth as well as of

moral truth. It is, for instance, beyond the power of any mathematician to state in degrees and minutes, the angle at which a man may lean without falling. Not being able to find accurately the centre of gravity of a man's body, he cannot say with certainty whether, at a given inclination, the *line of direction* will or will not fall outside the base. But we do not, therefore, take exception to the first principles of mechanics. In spite of our inability to follow out those first principles to all their consequences, we know that the stability or instability of a man's attitude might be accurately determined by them, were our perceptions competent to take in all the data of such a problem. Similarly, it is argued that, although there may arise out of the more complex social relationships, questions which are apparently not soluble by comparing the respective amounts of freedom the concerned persons assume, it must nevertheless be granted that, whether we see it or not, the claims they

make are either equal or unequal, and the dependent actions right or wrong accordingly.

[NOTE.—Up to the point now reached, the omissions and abridgments have not much disturbed the continuity of the general argument. But what here follows represents in only a fragmentary way the developed applications of the First Principle. These applications have since been replaced by those which in a matured

and completed form, constitute the greater part of division IV of The Principles of Ethics, treating of Justice. Sundry of the original chapters of Social Statics, which came next after the foregoing, are now omitted altogether; others are much shortened; and of the remainder I have reproduced only fragments. Throughout the last eight chapters of the work, however, the primitive continuity has been preserved. abridgments and revisions only having been made in them.]

## THE RIGHT OF PROPERTY

THE moral law, being the law of the social state, is obliged to ignore the pre-social state. Constituting, as the principles of pure morality do, a code of conduct for the perfectly civilized man, they cannot be made to adapt themselves to the actions of the uncivilized man, even under the most ingenious hypothetical conditions—cannot be made even to recognize those actions so as to pass any definite sentence upon them. Overlooking this fact, thinkers, in their attempts to prove some of the first theorems of ethics, have commonly fallen into the error of referring back to an imaginary state of savage wildness, instead of referring forward to an ideal civilization, as they should have done; and have, in consequence, entangled themselves in difficulties arising out of the discordance between ethical principles and the assumed premises. To this circumstance is attributable that vagueness by which the arguments used to establish the right of property in a logical manner, are characterized.

“Though the earth and all inferior creatures,” says Locke, “be common to all men, yet every man has a property in

his own person: this nobody has a right to but himself. The labour of his body and the work of his hands, we may say are properly his. Whatever then he removes out of the state that nature hath provided and left it in, he hath mixed his labour with, and joined to it something that is his own, and thereby makes it his property. It being by him removed from the common state nature hath placed it in, it hath by this labour something annexed to it that excludes the common right of other men. For this labour being the unquestionable property of the labourer, no man but he can have a right to what that is once joined to, at least when there is enough and as good left in common for others.”

One might, in reply to this, observe that as, according to the premises, “the earth and all inferior creatures are common to all men,” the consent of all men must be obtained before any article can be equitably “removed from the common state nature hath placed it in.” It might be argued that the real question is overlooked, when it is said that, by gathering any natural product, a man “hath mixed his labour with it, and joined to it some-

thing that is his own, and thereby made it his property"; for the point to be debated is, whether he has any right to gather, or mix his labour with, that which, by the hypothesis, previously belonged to mankind at large. It may be quite true that the labour a man expends in catching or gathering, gives him a better right to the thing caught or gathered, than any *one* other man; but the question at issue is, whether by labour so expended, he has made his right to the thing caught or gathered, greater than the pre-existing rights of *all* other men put together.

Further difficulties are suggested by the qualification, that the claim to any article of property thus obtained, is valid only "when there is enough and as good left in common for others." A condition like this gives birth to such a host of queries, doubts, and limitations, as practically to neutralize the general proposition entirely. It may be asked, for example - How is it to be known that

enough is "left in common for others"? Who can determine whether what remains is "as good" as what is taken? How if the remnant is less accessible? If there is not enough "left in common for others," how must the right of appropriation be exercised? Why, in such case, does the mixing of labour with the acquired object, cease to "exclude the common right of other men"? Supposing *enough* to be attainable, but not all equally *good*, by what rule must each man choose? Out of which inquisition it seems impossible to liberate the alleged right, without such mutilations as to render it, from an ethical point of view, entirely valueless.

Thus, as already hinted, we find that the circumstances of savage life, render the principles of abstract morality inapplicable; for it is impossible, under pre-social conditions, to determine the rightness or wrongness of certain actions by comparing the amounts of freedom assumed by those concerned.

## SOCIALISM

THE doctrine that all men have equal rights to the use of the Earth, seems at first sight, to countenance a species of social organization, at variance with that from which the right of property has just been deduced; <sup>1</sup> an organization, namely, in which the public, instead of letting out the land to individual members of their body, shall retain it in their own hands; cultivate it by joint-stock agency; and share the produce; in fact, what is usually termed Socialism or Communism.

<sup>1</sup> Referring to an omitted part of the last chapter, the argument of which, with modifications, will now be found in Part IV of *The Principles of Ethics*.

Plausible though it may be, such a scheme is not capable of realization in strict conformity with the moral law. Of the two forms under which it may be presented, the one is ethically imperfect, and the other, although correct in theory, is impracticable.

Thus, if an equal portion of the earth's produce is awarded to each man, irrespective of the amount or quality of the labour he has contributed towards the obtainment of that produce, a breach of equity is committed. Our first principle requires, not that all shall have like shares of the things which minister to the gratification of the faculties, but that all shall have like freedoms to pursue

those things—shall have like scope. It is one thing to give to each an opportunity of acquiring the objects he desires ; it is another, and quite a different thing, to give the objects themselves, no matter whether due endeavour has or has not been made to obtain them. Nay more, it necessitates an absolute violation of the principle of equal freedom. For when we assert the entire liberty of each, bounded only by the like liberties of all, we assert that each is free to do whatever his desires dictate, within the prescribed limits—that each is free, therefore, to claim for himself all those gratifications, and sources of gratification, attainable by him within those limits—all those gratifications, and sources of gratification, which he can secure without trespassing on the spheres of action of his neighbours. If, therefore, out of many starting with like fields of activity, one obtains, by his greater strength, greater ingenuity, or greater application, more gratifications and sources of gratification than the rest, and does this without trenching upon the equal freedoms of the rest, the moral law assigns him an exclusive right to all those extra gratifications and sources of gratification ; nor can the rest take them from him without claiming for themselves greater liberty of action than he claims, and thereby violating that law. Whence it follows, that an equal apportionment of the fruits of the earth among all, is not consistent with pure justice.

If, on the other hand, each is to have allotted to him a share of produce proportionate to the degree in which he has aided production, the proposal, while it is abstractedly just, is no longer practicable. Were all men cultivators of the soil, it would perhaps be possible to form approximately true estimates of their

several claims. But to ascertain the respective amounts of help given by different kinds of mental and bodily labourers, towards procuring the general stock of the necessities of life, is an impossibility. We have no means of making such a division save that afforded by the balancing of supply and demand, and this the hypothesis excludes.

If, as M. Proudhon asserts, "all property is robbery"—if no one can equitably become the exclusive possessor of any article, or, as we say, obtain a right to it then, among other consequences, it follows that a man can have no right to the things he consumes for food. And if these are not his before eating them, how can they become his at all? As Locke asks, "When do they begin to be his? when he digests? or when he eats? or when he boils? or when he brings them home?" If no previous acts can make them his property, neither can any process of assimilation do it : not even absorption of them into the tissues. Wherefore, pursuing the idea, we arrive at the curious conclusion, that as the whole of his bones, muscles, skin, &c., have been thus built up from nutriment not belonging to him, a man has no property in his own flesh and blood—has no more claim to his own limbs than he has to the limbs of another, and has as good a right to his neighbour's body as to his own. Did we exist after the same fashion as those compound polyps, in which a number of individuals are based upon a living trunk common to them all, such a theory would be rational enough. But until Communism can be carried to that extent, it will be best to stand by the old doctrine.

## THE RIGHT OF PROPERTY IN IDEAS

THAT a man's right to the produce of his brain is equally valid with his right to the produce of his hands, is a fact which has yet obtained but a very imperfect recognition. It is true that we have patent laws, a law of copyright, and acts for the registration of designs; but these, or at any rate two of them, have been enacted not so much in obedience to the dictates of justice, as in deference to the suggestions of trade-policy. "A patent is not a thing which can be claimed as a right," we are told by legal authorities, but it is intended to "act as a stimulus to industry and talent." It is not because the piracy of patterns would be wrong that legislators forbid it, but because they wish to afford "encouragement to manufacturers." Similar also are the current opinions. Measures of this nature are commonly considered by the public as giving to inventors a certain "privilege," a "reward," a sort of modified "monopoly."

The prevalence of such a belief is by no means creditable to the national conscience. To think that the profits which a speculator makes by a rise in the share-market, should be recognized as legally and equitably his property, and yet that some new combination of ideas, which it may have cost an ingenuous man years of application to complete, cannot be "claimed as a right" by that man! To think that a sinecurist should be held to have a "vested interest" in his office, and a just title to compensation if it is abolished, and yet that an invention over which no end of mental toil has been spent, and on which the poor mechanic has laid out perhaps his last sixpence—an invention which he has completed entirely by his own labour and with his own materials—has wrought, as it were, out of the very substance of his own mind—should not be acknowledged as his property! To think that his title

to it should be admitted merely as a matter of convenience—admitted even then only on payment of some £400—and, after all, quashed on the most trifling pretences! What a thick-skinned perception of justice does this show! One would think that equity afforded no guidance beyond transactions in material things—weights, measures, and money. Let a shop-boy take from his master's till a visible, tangible, ponderable sovereign, and all can see that the rights of ownership have been violated. Yet those who exclaim with such indignant virtue against theft will purchase a pirated edition of a book without any qualms of conscience concerning the receipt of stolen goods. Dishonesty, when shown in house-breaking or sheep-stealing, is held up to eternal infamy; but the manufacturer who steals his foreman's improved plan for the spinning of cotton, or the building of steam engines, continues to be held in high respect. The law is active enough in apprehending the urchin who may have deprived some comfortable citizen of his pocket-handkerchief; but there is no redress for the poverty-stricken schemer who is robbed by some wealthy scamp of that which formed the sole hope of his life.

It is a common notion that the exclusive use by its discoverer of any new or improved mode of production, is a species of monopoly, in the sense in which that word is conventionally used. To let a man have the entire benefit accruing from the employment of some more efficient machine, or better process invented by him; and to allow no other person to adopt and apply for his own advantage the same plan, they hold to be an injustice. Nor are there wanting philanthropic and even thinking men, who consider that the valuable ideas originated by individuals—ideas which may be of great national advantage—

should be taken out of private hands and thrown open to the public at large.

"And pray, gentlemen," an inventor might fairly reply, "why may not I make the same proposal respecting your goods and chattels, your clothing, your houses, your railway shares, and your money in the funds? If you are right in the interpretation you give to the term 'monopoly,' I do not see why that term should not be applied to the coats on your backs and the provisions on your dinner tables. With equal reason I might argue that you unjustly 'monopolize' your furniture, and that you ought not in equity to have the 'exclusive use' of so many apartments. If 'national advantage' is to be the supreme rule, why should we not appropriate your wealth, and the wealth of others like you, to the liquidation of the State-debt? True, as you say, you came honestly by all this property; but so did I by my invention. True, as you say, this capital, on the interest of which you subsist, was acquired by years of toil—is the reward of persevering industry: well, I may say the like of this machine. While you were gathering profits, I was collecting ideas; the time you spent in conning the prices current, was employed by me in studying mechanics; your speculations in new articles of merchandise, answer to my experiments, many of which were costly and fruitless; when you were writing out your accounts I was making drawings; and the same perseverance, patience, thought, and toil, which enabled you to make a fortune, have enabled me to complete my invention. Like your wealth, it represents so much accumulated labour: and I am living upon the profits it produces me, just as you are living upon the interest of your invested savings. Beware, then, how you question my claim. If I am a monopolist, so also are you; so also is every man. If I have no right to these products of my brain, neither have you to those of your hands. No one can become the sole owner of any article whatever; and 'all property is robbery.'"

They fall into a serious error who suppose that the exclusive right assumed by a discoverer, is something taken from the public. He who in any way increases the powers of production, is seen by all, save a few insane Luddites, to be a general benefactor. The successful inventor makes a further conquest over nature. He economizes labour—helps to emancipate men from their slavery to the needs of the body. He cannot, if he would, prevent society from largely participating in his good fortune. Before he can gain any benefit from his new process or apparatus, he must first confer a benefit on his fellow-men—must either offer them a better article at the price usually charged, or the same article at a less price. If he fails to do this, his invention is a dead letter; if he does it, he makes society a partner in the new mine of wealth he has opened.

Let us remember, too, that in this, as in other cases, disobedience to the moral law is ultimately detrimental to all. It is a well-proved fact that the insecurity of material property which results from general dishonesty, inevitably reacts to the punishment of society. Industrial energy diminishes in proportion to the uncertainty of its reward. Those who do not know that they shall reap will not sow. Instead of employing it in business, capitalists hoard what they possess, because productive investments are dangerous. Hence arises a universal straitness of means. Every enterprise is crippled by want of confidence. And from general distrust spring general discouragement, apathy, idleness, poverty, and their attendant miseries, involving alike all grades of men. Similar in kind, and less only in degree, is the curse attendant upon insecurity of property in ideas. "If," argues the inventor, "others are to enjoy the fruits of these wearisome studies and these numberless experiments, why should I continue them? If, in addition to all the possibilities of failure in the scheme itself, all the time, trouble, and expense of my investigations, I am liable to be

deprived of my right, I ought to abandon the project at once." And although such reflections may often fail to extinguish the sanguine hope of an inventor, yet after having once suffered the losses which, ten to one, society will inflict upon him, he will take good care never again to enter on a similar undertaking. Whatever other ideas he may then or subsequently entertain will remain undeveloped and probably die with him. Were people duly to appreciate the consequent check put on the development of the means of production, and could they properly estimate the loss thereby entailed on themselves, they would begin to see that the recognition of the right of property in ideas, is only less important than the recognition of the right of property in goods.

In consequence of the probability, or perhaps we may say the certainty, that the causes leading to the evolution of a new idea in our mind, will eventually

produce a like result in some other mind, the claim above set forth must not be admitted without limitation. Many have remarked the tendency which exists for an invention or discovery to be made by independent investigators nearly at the same time. There is nothing really mysterious in this. A certain state of knowledge, a recent advancement in science, the occurrence of some new social want,—these form the conditions under which minds of similar characters are stimulated to like trains of thought, ending as they are prone to do in kindred results. Such being the fact, there arises a qualification to the right of property in ideas, which it seems difficult and even impossible to specify definitely.

The laws of patent and copyright express this qualification by confining the inventor's or author's privilege within a certain term of years. But in what way the length of that term may be found with correctness there is no saying.

## THE RIGHTS OF WOMEN

WHOSO urges the mental inferiority of women in bar of their claim to equal rights with men, may be met in various ways.

1. If rights are to be meted out to the two sexes in the ratio of their respective amounts of intelligence, then must the same system be acted upon in the apportionment of rights between man and man. Whence must proceed all those multiplied perplexities already pointed out. (See p. 35.)

2. In like manner it will follow that, as there are here and there women of unquestionably greater ability than the average of men, some women ought to have greater rights than some men.

3. Wherefore, instead of a certain fixed allotment of rights to all males and another to all females, the hypothesis itself involves an infinite gradation of rights, irrespective of sex entirely, and sends us once more in search of those unattainable desiderata—a standard by which to measure capacity, and another by which to measure rights.

Not only, however, does the theory thus fall to pieces under the mere process of inspection; it is absurd on the face of it, when freed from the disguise of hackneyed phraseology. For what is it that we mean by rights? Nothing else than freedom to exercise the faculties. And what is the meaning of the

assertion that woman is mentally inferior to man? Simply that her faculties are less powerful. What then does the dogma, that because woman is mentally inferior to man she has less extensive rights, amount to? Just this,—that because woman has weaker faculties than man, she ought not to have like liberty with him to exercise the faculties she has!

Men's wishes eventually get expressed in their faiths—their real faiths, that is ; not their merely nominal ones. A fiery passion consumes all evidences opposed to its gratification, and fusing together those that serve its purpose, casts them into weapons by which to achieve its end. There is no deed so vicious but what the actor excuses to himself; and if the deed is often repeated the excuse becomes a creed. The vilest transactions—Bartholomew massacres and the like—have had defenders ; nay, have been inculcated as fulfilments of the divine will. There is wisdom in the fable which represents the wolf as raising accusations against the lamb before devouring it. No invader ever raised standard, but persuaded himself that he had a just cause. Sacrifices and prayers have preceded every military expedition, from one of Cæsar's campaigns down to a border foray. God is on our side, is the universal cry. Each of two conflicting nations consecrates its flags ; and whichever conquers sings a *Te Deum*. Attila conceived himself to have a "divine claim to the dominion of the Earth"; the Spaniards subdued the Indians under plea of converting them to Christianity, hanging thirteen refractory ones in honour of Jesus Christ and his apostles ; and we English justify our colonial aggressions by saying that the Creator intends the Anglo-Saxon race to people the world! An insatiate lust of conquest transmutes manslaying into a virtue ; and, in more races than one, implacable revenge has made assassination a duty. A clever theft was praiseworthy among the Spartans ; and it is equally so among Christians, provided it be on

a sufficiently large scale. Piracy with heroism with Jason and his follower, was so also with the Norsemen ; is still with the Malays ; and there is now wanting some golden fleece for a prey. Among money-hunting people a man commended in proportion to the number of hours he spends in business. In our day the rage for accumulation has aped theorized work. And even the miser not without a code of morals by which to defend his parsimony. The monks held printing to be an invention of the devil and some of our modern sectaries regard their refractory brethren as under diabolical possession.

This sway of feeling over belief everywhere determines men's ideas about their relations to women, which are harsh in proportion as the social state is barbarous. Look where we will, we find that just as far as the law of the strongest regulates the relationships between man and man, does it regulate the relationships between man and woman. Despotism in the state is associated with despotism in the family. Turkey, Egypt, India, China, Russia, the feudal states of Europe—it needs but to name these to suggest hosts of illustrative facts.

The arbitrary rule of one human being over another, is fast becoming recognized as essentially rude and brutal. In our day, the man of refined feeling does not like to play the despot over his fellow. He is disgusted if one in humble circumstances cringes to him. So far from wishing to elevate himself by depressing his poor and ignorant neighbours, he strives to put them at their ease in his presence—encourages them to be have in a less submissive and more self respecting manner. He feels that a fellow-man may be enslaved by imperious words and manners as well as by tyrannical deeds ; and hence he avoids a dictatorial style of speech to those below him. Even paid domestics, to whose services he has obtained a right by contract, he does not like to address in a tone of authority. He seeks rather to

disguise his character of master ; to this end wraps up his commands in the shape of requests ; and continually employs the phrases, "If you please," and "Thank you."

In the conduct of the modern gentleman to his friend, we have additional signs of this growing respect for another's dignity. Every one must have observed the carefulness with which those who are on terms of affectionate intimacy, shun anything in the form of supremacy on either side, or endeavour to banish from remembrance, by their behaviour to each other, whatever of supremacy there may exist. Who is there that has not witnessed the dilemma in which the wealthier of two such is sometimes placed, between the wish to confer a benefit on the other, and the fear that in so doing he may offend by assuming the attitude of a patron ? And who is there that does not feel how destructive it would be of the sentiment subsisting between himself and his friend were he to play the master over his friend, or his friend to play the master over him ?

A further increase of this same refinement will show men that there is a fatal incongruity between the matrimonial servitude which our law recognizes, and the relation that *ought* to exist between husband and wife. Surely if he who possesses any generosity of nature dislikes speaking to a hired domestic in a tone of authority—if he cannot bear assuming towards his friend the behaviour of a superior—how utterly repugnant to him should it be, to make himself ruler over one on whose behalf all his kindly sentiments are specially enlisted, and for whose rights and dignity he ought to have the most active sympathy !

Command is a blight to the affections. Whatsoever of beauty—whatsoever of poetry, there is in the passion that unites the sexes, withers up and dies in the cold atmosphere of authority. Native as they are to such widely-separated regions of our nature, Love and Coercion cannot possibly flourish together. Love is sympathetic : Coercion

is callous. Love is gentle : Coercion is harsh. Love is self-sacrificing : Coercion is selfish. How then can they co-exist ? It is the property of the first to attract, while it is that of the last to repel ; and, conflicting as they thus do, it is the constant tendency of each to destroy the other. Let whoever thinks the two compatible imagine himself acting the master over his betrothed. Does he believe that he could do this without any injury to the subsisting relationship ? Does he not know rather that a bad effect would be produced upon the feelings of both by the assumption of such an attitude ? And confessing this, as he must, is he superstitious enough to suppose that the going through a form of words will render harmless that use of command which was previously hurtful ?

There are many who think that authority, and its ally compulsion, are the sole agencies by which human beings can be controlled. Anarchy or government are, with them, the only conceivable alternatives. Believing in nothing but what they see, they cannot realize the possibility of a condition of things in which peace and order shall be maintained without force, or the fear of force. By such as these, the doctrine that the reign of man over woman is wrong, will no doubt be combated on the ground that the domestic relationship can only exist by the help of such supremacy. The impracticability of an equality of rights between the sexes will be urged by them in disproof of its rectitude. It will be argued that were they put upon a level, husband and wife would be for ever in antagonism—that as, when their wishes clashed, each would possess a like claim to have his or her way, the matrimonial bond would daily be endangered by the jar of opposing wills, and that, involving as it would a perpetual conflict, such an arrangement of married life must necessarily be an erroneous one.

A very superficial conclusion this.

It has been already pointed out (p. 18), that there *must* be an inconsistency between the perfect law and an imperfect state. The worse the condition of society the more visionary must a true code of morality appear. The fact that any proposed principle of conduct is at once fully practicable—requires no reformation of human nature for its complete realization—is not a proof of its truth : is proof rather of its error. And, conversely, a certain degree of incongruity between such a principle and humanity as we know it, though no proof of the correctness of that principle, is at any rate a fact in its favour. Hence the allegation that mankind are not good enough to admit of the sexes living together harmoniously under the law of equal freedom in no way militates against the validity or sacredness of that law.

But the never-ceasing process of adaptation will gradually remove this obstacle to domestic rectitude. Recognition of the moral law and an impulse to act up to it, going hand in hand, as we have seen that they must do (p. 15), equality of rights in the married state will become possible as fast as there arises a perception of its justness. As elsewhere shown (p. 30), the same sentiment which leads us to maintain our own rights, leads us, by its sympathetic excitement, to respect the rights of our neighbours. A state in which every one is jealous of his natural claims, is not therefore a litigious state, because if there is a due fellow feeling there is of necessity a diminished tendency to aggression. Experience proves this. For, as it cannot

be denied that there is now a greater disposition among men towards the assertion of individual liberty than existed during the feudal ages, so neither can it be denied that there is now a less disposition among men to trespass against each other than was then exhibited. The two changes are co-ordinate, and must continue to be so. Hence, whenever society shall have become civilized enough to recognize the equality of rights between the sexes—when women shall have attained to a clear perception of what is due to them, and men to a nobility of feeling which shall make them concede to women the freedom which they themselves claim—humanity will have undergone such a modification as to render an equality of rights practicable.

Married life under this ultimate state of things will not be characterized by perpetual squabbles, but by mutual concessions. Instead of a desire on the part of the husband to assert his claims to the uttermost, regardless of those of his wife, or on the part of the wife to do the like, there will be a watchful desire on both sides not to transgress. Neither will have to stand on the defensive, because each will be solicitous for the rights of the other. Committing a trespass will be the thing feared, and not the being trespassed against.

[NOTE.—For the author's views concerning the political position of women, the reader is referred to Part IV of *The Principles of Ethics* treating of Justice, Chapters xv and xxiv.]

## THE RIGHTS OF CHILDREN

As an abstract truth we all admit that passion distorts judgment ; yet we never inquire whether our passions are influencing us. We all decry prejudice, yet are all prejudiced. We see how habits, and interests, and likings, mould the theories of those around us ; yet forget that our own theories are similarly moulded. Nevertheless, the instances in which our feelings bias us in spite of ourselves are of hourly recurrence. That proprietary passion which a man has for his ideas, veils their defects from him as effectually as maternal fondness blinds a mother to the imperfections of her offspring. An author cannot, for the life of him, judge correctly of what he has just written : he has to wait until lapse of time enables him to read it as though it were a stranger's, and he then discerns flaws where all had seemed perfect. It is only when his enthusiasm on its behalf has grown cold, that the artist is able to see the faults of his picture. While they are transpiring, we do not perceive the ultimate bearings of our own acts or the acts of others towards us : only in after years are we able to philosophize upon them. Just so, too, is it with successive generations. Men of the past quite misunderstood the institutions they lived under. They pertinaciously adhered to the most vicious principles, and were bitter in their opposition to right ones, at the dictates of their attachments and antipathies. So difficult is it for man to emancipate himself from the invisible fetters which habit and education cast over his intellect ; and so palpable is the consequent incompetency of a people to judge rightly of itself and its deeds or opinions, that the fact has been embodied in the aphorism —“No age can write its own history.”

If we act wisely, we shall assume that the reasonings of modern society are subject to the like disturbing influences. We shall conclude that, even now, as in

times gone by, opinion is but the counterpart of condition. We shall suspect that many of those convictions which seem the results of dispassionate thinking, have been nurtured in us by circumstances. We shall confess that as, heretofore, fanatical opposition to this doctrine and bigoted adhesion to that, have been no tests of the truth or falsity of the said doctrines ; so neither is the strength of attachment or dislike which a nation now exhibits towards certain principles, any proof of their correctness or their fallacy.

We say that a man's character may be told by the company he keeps. We might similarly say that the truth of a belief may be judged by the beliefs with which it is associated. Given a theory universally current among degraded sections of our race—a theory received only with considerable abatements by civilized nations—a theory in which men's confidence diminishes as fast as society advances ; and we may safely pronounce that theory to be a false one. On such, along with other evidence, the subordination of sex was lately condemned. Those commonly-observed facts, that the enslavement of woman is invariably associated with a low type of social life, and that, conversely, her elevation uniformly accompanies progress, were cited in part proof that the subjection of female to male is wrong. If now, instead of *women* we read *children*, kindred facts may be cited, and a kindred deduction may be drawn. If it be true that the dominion of man over woman has been oppressive in proportion to the badness of the age or the people, it is also true that parental authority has been stringent and unlimited in a like proportion. If it be a fact that the emancipation of women has kept pace with the emancipation of society, it is likewise a fact that the once despotic rule of the old over

the young has been ameliorated at the same rate.

Whoever wants illustrations of this alleged harmony between the political, connubial, and filial relationships, may discover them everywhere. Scanning those primitive states of humanity during which the aggressive conduct of man to man renders society scarcely possible, he will see not only that wives are slaves and exist by sufferance, but that children hold their lives by the same tenure, and are sacrificed to the gods when fathers so will. He may observe how, during classic times, the thralldom of five-sixths of the population was accompanied both by a theory that the child is the property and slave of its male parent, and by a legal fiction which regarded wives as children similarly owned. In China, under a government purely autocratic, there exists a public opinion which deems it an unpardonable offence for a wife to accuse her husband to the magistrate, and which ranks filial disobedience as a crime next in atrocity to murder. Nor is our own history barren of illustrations. On reviewing those times when constitutional liberty was but a name, when men were denied freedom of speech and belief, when the people's representatives were openly bribed and justice was bought—the times, too, with which the laws enacting the servitude of women were in complete harmony—the observer cannot fail to be struck with the harshness of parental behaviour, and the attitude of humble subjection which sons and daughters had to assume. Between the last century, when our domestic condition was marked by the use of *Sir* and *Madam* in addressing parents, and by the doctrine that a child ought unhesitatingly to marry whomsoever a father appointed, and when our political condition was marked by aristocratic supremacy, by the occurrence of church-and-king riots, and by the persecution of reformers—between that day and ours, the decline in the rigour of paternal authority and in the severity of political control, has been simultaneous. And

the like companionship of facts is seen in the present rapid growth of democratic feeling, and the equally rapid spread of a milder system of juvenile training.

Considering what universal attention the culture of the young has lately received, there is reason for concluding that as the use of brute force for educational purposes has greatly declined something radically wrong must be involved in it. But without dwelling upon this, which, like all inference drawn from expediency, is liable to have its premises called in question, let us judge of coercive education not by the effects it is *believed* to produce, but by those it *must* produce.

Education has for a chief object the formation of character. To curb restive propensities, to awaken dormant sentiments, to strengthen the perceptions and cultivate the tastes, to encourage this feeling and repress that, so as finally to develop the child into a man of well-proportioned and harmonious nature—this is alike the aim of parent and teacher. Those, therefore, who advocate coercion in the management of children, must do so because they think it the best means of compassing the desired object—formation of character. Paternity has to devise some kind of rule for the nursery. Impelled partly by creed, partly by custom, partly by inclination, paternity decides in favour of a pure despotism, and exhibits the rod as the final arbiter in all disputes. And of course this system of discipline is defended as the one best calculated to curb restive propensities, awaken dormant sentiments, &c., as aforesaid. Suppose, now, we ask how the plan works. An unamiable little urchin is pursuing his own gratification regardless of the comfort of others—is perhaps annoyingly vociferous in his play; or is amusing himself by teasing a companion; or is trying to monopolize the toys intended for others in common with himself. Well; some kind of interposition is manifestly called for.

Paternity with knit brows and in a severe tone, commands desistance--visits anything like reluctant submission with a sharp "Do as I bid you"--if need be, hints at a whipping or the black hole. After sundry exhibitions of perverse feeling, the child gives in; showing, however, by its sullenness the animosity it entertains. Meanwhile paternity pokes the fire and complacently resumes the newspaper, under the impression that all is as it should be. Most unfortunate mistake!

If the thing wanted had been the mere repression of noise, or the mechanical transfer of a plaything, perhaps no better course could have been pursued. Had it been of no consequence under what impulse the child acted, so long as it fulfilled a given mandate, nothing would remain to be said. But something else was needed. It was not the deeds, but the feeling from which the deeds sprung that required dealing with. Here were palpable manifestations of selfishness--exhibitions on a small scale of that unsympathetic nature to which our social evils are mainly attributable. What, then, was the thing wanted? Clearly to generate a state of mind which, had it previously existed, would have prevented the offending actions. Or, speaking definitely, it was necessary to strengthen that sympathy to the weakness of which the ill behaviour was traceable.

But sympathy can be strengthened only by exercise. No faculty whatever will grow, save by the performance of its special function--a muscle by contraction; the intellect by perceiving and thinking; a moral sentiment by feeling. Sympathy, therefore, can be increased only by exciting sympathetic emotions. A selfish child is to be rendered less selfish, only by arousing in it a fellow-feeling with the desires of others.

Observe, then, how the case stands. A grasping hard-natured boy is to be humanized; and to this end it is proposed to use frowns, threats, and the

stick? To stimulate that faculty which originates our regard for the happiness of others, we are told to inflict pain, or the fear of pain? The problem is to generate in a child's mind more fellow-feeling; and the answer is--beat it, or send it supperless to bed!

Let those who have no faith in any instrumentalities for the rule of human beings save the stern will and the strong hand, visit the Hanwell Asylum for the insane. Let all self-styled practical men, who, in the pride of their savage theories, shower sarcasms upon the movements for peace, for the abolition of capital punishments, and the like, go and witness to their confusion how a thousand lunatics can be managed without the use of force. Let these sneerers at "sentimentalisms" reflect on the horrors of madhouses as they used to be; where was weeping and wailing and gnashing of teeth, where chains clanked dismally, and where the silence of the night was rent by shrieks that made the belated passer-by hurry on shudderingly. Let them contrast with these horrors the calmness, the contentment, the tractability, the improved health of mind and body, and the not unfrequent recoveries, that have followed the abandonment of the strait-jacket *régime*: <sup>1</sup> and then let them blush for their creed.

And shall the poor maniac, with diseased feelings and a warped intellect, persecuted as he constantly is by the suggestions of a morbid imagination,--shall a being with a mind so hopelessly chaotic that even the most earnest pleader for human rights would make his case an exception,--shall he be amenable to a non-coercive treatment, and shall a child not be amenable to it? Will any one maintain that madmen can be managed by suasion but not children? that moral-force methods are best for those deprived of reason, but physical-force methods for those possessing it? Hardly. If

<sup>1</sup> See Dr. Conolly on Lunatic Asylums.

by judicious conduct the confidence even of the insane may be obtained—if even to the beclouded intelligence of a lunatic, kind attentions and a sympathetic manner will carry the conviction that he is surrounded by friends and not by demons—and if, under that conviction, even he, though a slave to every disordered impulse, becomes comparatively docile, how much more under the same influence will a child become so. Do but gain a boy's trust; convince him by your behaviour that you have his happiness at heart; let him discover that you are the wiser of the two; let him experience the benefits of following your advice and the evils that arise from disregarding it; and fear not you will readily enough guide him.

If we wish a boy to become a good mechanic we ensure his expertness by an early apprenticeship. The young musician, that is to be, passes several hours a day at his instrument. Initiatory courses of outline drawing and shading are gone through by the intended artist. For the future accountant, a thorough drilling in arithmetic is prescribed. The reflective powers are sought to be developed by the study of mathematics. Thus, all training is founded on the principle that culture must precede proficiency. In such proverbs as—"Habit is second nature," and "Practice makes perfect," men have expressed those net products of universal observation on which every educational system is ostensibly based.

What now is the most important attribute of man as a moral being? May we not answer—the faculty of self-control? This it is which forms a chief distinction between the human being and the brute. It is in virtue of this that man is defined as a creature "looking before and after." It is in their larger endowment of this that the civilized races are superior to the savage. In supremacy of this consists one of the perfections of the ideal man. Not to be

impulsive—not to be spurred hither and thither by each desire which in turn comes uppermost; but to be self-restrained, self-balanced, governed by the joint decision of the feelings in council assembled, before whom every action shall have been fully debated and calmly determined this it is which moral education strives to produce.

But the power of self-government, like all other powers, can be developed only by exercise. Whoso is to rule over his passions in maturity, must be practised in ruling over his passions during youth. Observe, then, the absurdity of the coercive system. Instead of habituating a boy to be a law to himself, as he is required in after-life to be, it administers the law for him. Instead of preparing him against the day when he shall leave the paternal roof, by inducing him to fix the boundaries of his actions and voluntarily confine himself within them, it marks out these boundaries for him, and says—"cross them at your peril." Here we have a being who, in a few years, is to become his own master, and, by way of fitting him for such a condition, he is allowed to be his own master as little as possible. While in every other particular it is thought desirable that what the man will have to do, the child should be well drilled in doing, in this most important of all particulars it is thought that the less practice he has the better. No wonder that those who have been brought up under the severest discipline so frequently turn out the wildest of the wild.

Indeed, not only does the physical-force system fail to fit the youth for his future position; it absolutely tends to unfit him. Were slavery to be his lot—if his after-life had to be passed under the rule of a Russian autocrat, or of an American cotton planter, no better method of training could be devised than one which accustomed him to that attitude of complete subordination he would subsequently have to assume. But just to the degree in which such

treatment would fit him for servitude, must it unfit him for being a free man among free men.

But why is education needed at all? Why does not the child grow spontaneously into a normal human being? Why should it be requisite to curb this propensity, to stimulate the other sentiment, and thus by artificial means to shape the mind into something different from what it would of itself become? Is not there here an anomaly in nature? Throughout the rest of creation we find the seed and the embryo attaining to perfect maturity without external aid. Drop an acorn into the ground, and it will in due time become a healthy oak without either pruning or training. The insect passes through its several transformations unhelped, and arrives at its final form possessed of every needful capacity and instinct. No coercion is needed to make the young bird or quadruped adopt the habits proper to its future life: its character, like its body, spontaneously assumes complete fitness for the part it has to play in the world. How happens it, then, that the human mind alone tends to develop itself wrongly? Must there not be some exceptional cause for this? Manifestly: and if so a true theory of education must recognize this cause.

It is an indisputable fact that the moral constitution which fitted man for his original predatory state, differs from the one needed to fit him for this social state to which multiplication of the race has led. In a foregoing part of our inquiry it was shown that adaptation is effecting a transition from the one constitution to the other. Living then, as we do, in the midst of this transition, we must expect to find traits of nature which are explicable only on the hypothesis that humanity is at present partially adapted to both these states, and not completely to either—has only in a degree lost the dispositions needed for savage life, and has but imperfectly acquired those needed for social life.

The anomaly just specified is one of these. Those respects in which a child requires restraint are the respects in which he is taking after the aboriginal man. The selfish squabbles of the nursery, the persecutions of the play-ground, the lyings and petty thefts, the rough treatment of inferior creatures, the propensity to destroy—all these imply that tendency to pursue gratification at the expense of other beings, which qualified man for the wilderness, and which disqualifies him for civilized life.

We have seen, however, that the instincts of the savage must decrease from inactivity, while the sentiments called forth by the social state must grow by exercise. These modifications will continue until our desires are brought into conformity with our circumstances. When that ultimate state in which morality shall have become organic is arrived at, this anomaly in the development of the child's character will have disappeared. The young human being will no longer be an exception in Nature, but will spontaneously unfold into a form fitted for the requirements of after-life.

And here we are naturally led to remark once more the necessary incongruity between the perfect law and the imperfect man. Whatsoever of Utopianism there may seem to be in the foregoing doctrines, is due not to any error in them but to faults in ourselves. A partial impracticability must not perplex us—must, on the contrary, be expected. Just in proportion to our distance below the purely moral state, must be our difficulty in acting up to the moral law, either in the treatment of children or in anything else.

Meanwhile let it be remarked that the main obstacle to the right conduct of education lies rather in the parent than in the child. It is not that the child is insensible to influences higher than that of force, but that the parent is not virtuous enough to use them. Fathers and mothers who enlarge on the trouble which filial misbehaviour entails upon

them, strangely assume that all the blame is due to the evil propensities of their offspring and none to their own. Though on their knees they confess to being miserable sinners, yet to hear their complaints of undutiful sons and daughters you might suppose that they were themselves immaculate. They forget that the faults of their children are reproductions of their own faults. They do not recognize in these much-scolded, often-beaten little ones so many looking-glasses wherein they may see reflected their own selfishness. It would astonish them to assert that they behave as improperly to their children as their children do to them. Yet a little candid self-analysis would show them that half their commands are issued more for their own convenience or gratification than for corrective purposes. Uncover its roots, and the theory of coercive education will be found to grow not out of man's love of his offspring but out of his love of dominion. Let any one who doubts this listen to that common repre-

mand—"How *dare* you disobey me?" and then consider what the emphasis means. No no, moral-force education is widely practicable even now, if parents were civilized enough to use it.

But of course the obstacle is in a measure reciprocal. Even the best samples of childhood as we now know it will be occasionally unmanageable by suasion; and when inferior natures have to be dealt with, the difficulty of doing without coercion must be proportionably great. Nevertheless patience, self-denial, a sufficient insight into youthful emotions, and a due sympathy with them, added to a little ingenuity in the choice of means, will usually accomplish far more than is supposed.

[NOTE.—These fragments of a chapter do not directly touch the question of the Rights of Children. A revised conception of these rights, duly qualified by recognition of the claims of parents, will be found in *The Principles of Ethics*, Part IV :—Justice.]

## POLITICAL RIGHTS

THERE have been books written to prove that the monarch's will should be the subject's absolute law; and if instead of monarch we read legislature, we have the expediency-theory. It merely modifies "divine right of kings" into divine right of majorities. It is despotism democratized. Between that old eastern *régime* under which the citizen was the private property of his ruler, having no rights at all, and that final *régime* under which his rights will be entire and inviolable, there comes this intermediate state in which he is allowed to possess rights, but only by sufferance of parlia-

ment. Thus the expediency-philosophy falls naturally into its place as a phenomenon attending our progress from past slavery to future freedom.

The self-importance of a Malvolio is sufficiently ludicrous; but we must go far beyond it to parallel the presumption of legislatures. Some steward who construed his stewardship into proprietorship, would more fitly illustrate it. Were such an one to argue that the estate he was appointed to manage had been virtually resigned into his possession—that to secure the advantages of his

administration its owner had given up all title to it—that he now lived on it only by his (the steward's) sufferance—and that he was in future to receive no emoluments from it, except at his (the steward's) good pleasure—then should we have an appropriate travesty upon the behaviour of governments to nations; then should we have a doctrine analogous to this fashionable one, which teaches how men on becoming members of a community, give up their natural rights for the sake of certain social advantages. Disciples of Hobbes and Bentham will doubtless protest against such an interpretation of it. Let us submit them to a cross examination.

"Your hypothesis that, when they entered into the social state, men surrendered their original freedom, implies that they entered into such state voluntarily, does it not?"

"It does."

"Then they must have considered the social state preferable to that under which they had previously lived?"

"Necessarily."

"Why did it appear preferable?"

"Because it offered greater security."

"Greater security for what?"

"Greater security for life, for property, and for the things that minister to happiness."

"Exactly. To get more happiness: that must have been the object. If they had expected to get more *un*happiness, they would not have willingly made the change, would they?"

"No."

"Does not happiness consist in the due satisfaction of all the desires? in the due exercise of all the faculties?"

"Yes."

"And this exercise of the faculties is impossible without freedom of action. The desires cannot be satisfied without liberty to pursue and use the objects of them."

"True."

"Now it is this freedom to exercise the faculties within specific limits, which we signify by the term 'rights,' is it not?"

"It is."

"Well, then, summing up your answers, it seems that, by your hypothesis, man entered the social state voluntarily: which means that he entered it for the sake of obtaining greater happiness; which means that he entered it to obtain fuller exercise of his faculties; which means that he entered it to obtain security for such exercise; which means that he entered it for the guaranteeing of his 'rights.' Therefore, either way we find that the preservation of rights was the object sought."

"So it would seem."

"But your hypothesis is that men give up their rights on entering the social state?"

"Yes."

"See now how you contradict yourself. You assert that on becoming members of a society, men give up what, by your own showing, they joined it the better to obtain!"

Of the many political superstitions, none is so widely diffused as the notion that majorities are omnipotent. Under the impression that the preservation of order will ever require power to be wielded by some party, the moral sense of our time feels that such power cannot rightly be exercised by any but the largest moiety of society. It interprets literally the saying that "the voice of the people is the voice of God"; and, transferring to the one the sacredness attached to the other, it concludes that from the will of the people, that is, of the majority, there can be no appeal. Yet is this belief entirely erroneous.

Suppose, for the sake of argument, struck by some Malthusian panic, a legislature duly representing public opinion were to enact that all children born during the next ten years should be drowned. Does any one think such an enactment would be warrantable? If not, there is evidently a limit to the power of a majority. Suppose, again, that of two races living together—Celts and Saxons, for example—the most

numerous determined to make the others their slaves. Would the authority of the greater number be in such case valid? If not, there is something to which its authority must be subordinate. Suppose, once more, that all men having incomes under £50 a year, were to resolve upon reducing every income above that amount to their own standard, and appropriating the excess for public purposes. Could their resolution be justified? If not it must be a third time confessed that there is a law to which the popular voice must defer. What,

then, is that law, if not the law of pure equity—the law of equal freedom? These restraints which all would put to the will of the majority, are the restraints set up by that law. We deny the right of a majority to murder, to enslave, or to rob, simply because murder, enslaving, and robbery are violations of that law—violations too gross to be overlooked. But if great violations of it are wrong, so also are smaller ones. If the will of the many cannot supersede the first principle of morality in these cases, neither can it in any.

## THE CONSTITUTION OF THE STATE

It is a tolerably well-ascertained fact that men are still selfish. And that being answering to this epithet will employ the power placed in their hands for their own advantage is self-evident. Directly or indirectly, either by hook or by crook, if not openly then in secret, their private ends will be served. Granting the proposition that men are selfish, we cannot avoid the corollary that those who possess authority will, if permitted, use it for selfish purposes.

Should any one need facts in proof of this, he may find them at every page in the nearest volume of history. Under the head "Monarchy," he will read of insatiable cravings after more territory; of confiscations of the subjects' property; of justice sold to the highest bidder; of continued debasements of coinage; and of a greediness which could even descend to share the gains of prostitutes.

He will find Feudalism exemplifying the same spirit by the cruelties inflicted upon serfs; by the right of private war; by the predatory incursions of borderers; by robberies practised on Jews; and by

the extortionate tribute wrung from burghers—all of them illustrations of that motto, so characteristic of the system—"Thou shalt want ere I want."

Does he seek like evidence in the conduct of later aristocracies? He may discover it in every state in Europe: in Spain, where the lands of nobles and clergy were long exempted from direct taxation; in Hungary, where, until lately, men of rank were free of all turnpikes, and only the mercantile and working classes paid; in France, before the first revolution, where the *tiercet* had to bear all the State burdens: in Scotland where, less than two centuries ago, it was the custom of lairds to kidnap the common people, and export them as slaves; in Ireland where, at the rebellion, a band of usurping land-owners hunted and shot the Catholics as they would game, for daring to claim their own.

If more proofs are wanted that power will be made to serve the purposes of its possessors, English legislation can furnish many such. Take, for example,

the significantly named "Black Act" (9th of George I.), which declares that any one disguised and in possession of an offensive weapon "appearing in any warren, or place where hares or conies have been, or shall be usually kept, and being thereof duly convicted, shall be adjudged guilty of felony, and shall suffer death, as in cases of felony, without benefit of clergy." Instance again the Inclosure Laws, by which commons were divided among the neighbouring landowners in the ratios of their holdings, regardless of the claims of the poor cottagers. Notice also the manoeuvre by which the land-tax has been kept stationary, or has even decreased, while other taxes have so enormously increased. Add to these the private monopolies (obtained from the King for "a consideration"), the perversion of the funds of public schools, the manufacture of places and pensions.

Nor is the disposition to use power for private ends less manifest in our own day. It shows itself in the assertion that an electoral system should give a preponderance to the landed interest. We see it in the legislation which relieves farmers from sundry assessed taxes, that they may be enabled to pay more rent. It is palpably indicated in the Game Laws. The conduct of the squire, who gets his mansion rated at one-third of its value, bears witness to it. It appears in the law enabling the landlord to anticipate other creditors, and to obtain his rent by immediate seizure of his tenant's property. We are reminded of it by the often-mentioned legacy and probate duties. It is implied by the fact that while no one dreams of compensating the discharged workman, gentlemen sinecurists must have their "vested interests" bought up if their offices are abolished. In the tracts of the Anti-Corn Law League it receives abundant illustration. It is seen in the votes of the hundred and fifty military and naval members of Parliament. And lastly, we find this self-seeking of those in authority

creeps out even in the doings of the "Right Reverend Fathers in God" forming the Ecclesiastical Commission, who have appropriated, for the embellishment of their own palaces, funds entrusted to them for the benefit of the Church.

But it is needless to accumulate illustrations. Though every historian the world has seen should be subpoenaed as a witness, the fact could not be rendered one whit more certain than it is already. Why ask whether those in power *have* sought their own advantage in preference to that of others? With human nature as we know it, they must have done so. It is this same tendency in men to pursue gratification at the expense of their neighbours which renders government needful. Were we not selfish, legislative restraint would be unnecessary. Evidently, then, the very existence of a State-authority proves that irresponsible rulers will sacrifice the public good to their personal benefit: all solemn promises, specious professions, and carefully arranged checks and safeguards, notwithstanding.

It is a pity that those who speak disparagingly of the masses have not wisdom enough, or candour enough, to make due allowance for the unfavourable circumstances in which the masses are placed. Suppose that, after carefully weighing the evidence, it should turn out that the working men *do* exhibit greater vices than those more comfortably off; does it therefore follow that they are morally worse? Are the additional temptations under which they labour to be left out of the estimate? Shall as much be expected at their hands as from those born into a more fortunate position? Ought the same demands to be made upon the possessors of five talents as upon the possessors of ten? Surely the lot of the hard-handed labourer is pitiable enough without having harsh judgments passed upon him. Consider well these endowments of his —these capacities, affections, tastes, and

the vague yearnings to which they give birth. Think of him now with his caged-up desires doomed to a daily, weekly, yearly round of painful toil, with very little remission save for food and sleep. Observe how he is tantalized by the pleasures he sees his richer brethren partaking of, but from which he must be for ever debarred. Note the humiliation he suffers from being looked down upon as of no account among men. And then remember that he has nothing to look forward to but a monotonous continuance of this till death. Is this a salutary state of things to live under ?

It is very easy for you, O respectable citizen, seated in your easy chair with your feet on the fender, to hold forth on the misconduct of the people ;—very easy for you to censure their extravagant and vicious habits ;—very easy for you to be a pattern of frugality, of rectitude, of sobriety. What else should you be ? Here are you surrounded by comforts, possessing multiplied sources of lawful happiness, with a reputation to maintain, an ambition to fulfil and the prospect of a competency for your old age. A shame indeed would it be if with these advantages you were not well regulated in your behaviour. You have a cheerful home, are warmly and cleanly clad, and fare, if not sumptuously every day, at any rate abundantly. For your hours of relaxation there are amusements. A newspaper arrives regularly to satisfy your curiosity ; if your tastes are literary books may be had in plenty ; and there is a piano if you like music. You can afford to entertain your friends, and are entertained in return. There are lectures, and concerts, and exhibitions, accessible if you incline to them. You may have a holiday when you choose to take one, and can spare money for an annual trip to the sea-side. And enjoying all these privileges you take credit to yourself for being a well-conducted man ! Small praise to you for it ! If *you* do not contract dissipated habits where is the merit ? you have few incentives to do so. It is no honour to *you* that you

do not spend your savings in sensual gratification ; you have pleasures enough without. But what would you do if placed in the position of the labourer ? How would these virtues of yours stand the wear and tear of poverty ? Where would your prudence and self-denial be if you were deprived of all the hopes that now stimulate you ; if you had no better prospect than that of the Dorsetshire farm-servant with his 10s. a week, or that of the perpetually-straitened stocking-weaver, or that of the mill-hand with his not infrequent suspensions of work ? Let us see you tied to an irksome employment from dawn till dusk ; fed on meagre food, and scarcely enough of that ; married to a factory girl ignorant of domestic management ; deprived of the enjoyments which education opens up ; with no place of recreation but the pot-house ; and then let us see whether you would be as steady as you are. Suppose your savings had to be made, not, as now, out of surplus income, but out of wages already insufficient for necessities ; and then consider whether to be provident would be as easy as you at present find it. Conceive yourself one of a class contemptuously termed “the great unwashed” ; stigmatized as brutish, stolid, vicious ; suspected of harbouring wicked designs ; and then say whether the desire to be respectable would be as practically operative on you as now. Lastly, imagine that seeing your capacities were but ordinary, and your competitors innumerable, you despaired of ever attaining to a higher station ; and then think whether the incentives to perseverance and fore-thought would be as strong as your existing ones.

After all it is a pitiful controversy, this about the relative vices of rich and poor. Two school-boys taunting each other with faults of which they were equally guilty, would best parody it. While indignant Radicalism denounces “the vile aristocrats,” these in their turn enlarge with horror on the brutality of the mob.

Neither party sees its own sins. Neither party recognizes in the other, itself in a different dress. Neither party can believe that it would do all the other does if placed in like circumstances. Yet a cool bystander finds nothing to choose between them--knows that the class-recriminations are but the inflammatory symptoms of a uniformly-diffused immorality. Label men how you please with titles of "upper," and "middle," and "lower," you cannot prevent them being units of the same society, acted upon by the same spirit of the age, moulded after the same type of character. The mechanical law that action and reaction are equal, has its moral analogue. The deed of one man to another tends ultimately to produce a like effect on both, be the deed good or bad. Do but put them in relationship, and no divisions into castes, no differences of wealth, can prevent men from assimilating. Whoso is placed among the savage will in process of time grow savage too; let his companions be treacherous and he will become treacherous in self-defence; surround him with the kind-hearted and he will soften; amid the refined he will acquire polish; and the same influences which thus rapidly adapt the individual to his society, ensure, though by a slower process, the general uniformity of a national character. This is no unsupported theory. Look when or where we please, thickly strewn proofs may be gathered. The cruelties of the old Roman rulers were fully paralleled by those over which the populace gloated in their arenas. During the servile wars of the middle age, barons tortured rebels and rebels tortured barons, with equal diabolical ferocity. Those massacres which took place a few years since in Galicia, covered with infamy both the people who committed them and the government which paid for them at per head. The Assam chiefs, to whom the East India Company have allowed compensation for abandoning their established right of plunder, are neither better nor worse than the mass

of the people, among whom joint-stock robbing companies are common. A similar sameness is exhibited in Russia, where all are alike swindlers, from the Prince Marshal who cheats the troops out of their rations, the officers who rob the Emperor of his stores, the magistrates who require bribing before they will act, the police who have secret treaties with the thieves, the shopkeepers who boast of their successful trickeries, down to the postmasters and droshky-drivers with their endless impositions. In Ireland, during the last century, while the people had their faction fights and secret revenge societies, duelling formed the amusement of the gentry, and was carried to such a pitch that the barrister was bound to give satisfaction to the witness he had bullied, or to the client who was dissatisfied with him.<sup>1</sup> And let us not forget how completely this unity of character is exhibited by the Irish of to-day, among whom Orangemen and Catholics display the same truculent bigotry; among whom magistrates and people join in party riots; and among whom the improvidence of the peasantry is to be paralleled only by that of the landlords. Our own history furnishes like illustrations in plenty. The time when England swarmed with highwaymen and outlaws, and when the populace had that sneaking kindness for a bold robber, still shown in some parts of the Continent, was the time when kings also played the bandit; when they cheated their creditors by debasing the coinage; when they impressed labourers to build their palaces (Windsor Castle, for instance), obliging them under pain of imprisonment to take the wages offered; and when they seized and sold men's goods, paying the owners less than a third of what the goods realized. During the age of religious persecution, Papists martyred Protestants and Protestants

<sup>1</sup> "It is time," said a veteran of this school, "to retire from the bar, since this new-fangled special pleading has superseded the use of gunpowder."—*Sketches of Ireland Sixty Years Ago.*

martyred Papists, with equal cruelty; and Cavaliers and Roundheads treated each other with the same rancour. In the present day dishonesty shows itself not less in the falsification of dockyard accounts, or the "cooking" of railway-reports, than in burglary or sheep-stealing; while those who see heartlessness in the dealings of slop-tailors and their sweepers, may also find it in the conduct of rich landlords who get double rent from poor allotment holders,<sup>1</sup> and in that of responsible ladies who underpay half-starved seamstresses.<sup>2</sup> Changes in tastes and amusements are similarly common to all. The contrast between the Squire Westerns and their descendants has its analogy among the people. As in Spain a bull fight is still the favourite pastime of both the Queen and her subjects, so in England fifty years ago, the cock pit and the prize-ring were patronized alike by peer and pauper; and a reference to the sporting papers will show that the lingering instincts of the savage are at this moment exhibited by about an equal percentage of all classes.

<sup>1</sup> "Allotments are generally given on poor and useless pieces of land, but the thorough cultivation they receive soon raises them to a high pitch of fertility. The more fertile they become the more the rent of each portion is increased, and we were informed that there are at present allotments on the Duke's property which, under the influence of the same competition which exists with reference to farms, bring his Grace a rent of £2, £3, and even £4 an acre."—*The Times Agricultural Commissioner on the Blenheim Estates*.

<sup>2</sup> See letters on "Labour and the Poor." An Officer's widow says:—"Generally the ladies are much harder in their terms than the tradespeople; oh, yes, the tradespeople usually show more lenity towards the needle-women than the ladies. I know the mistress of an institution who refused some chemises of a lady who wanted to have them made at 9d. She said she would not impose upon the poor workpeople so much as to get them made at that price."—*Morning Chronicle*, November 16, 1849. A vendor of groundsel and turfs for singing birds says:—

"The ladies are very hard with a body. They tries to beat me down, and particular in the matter of turfs. They tell me they can buy half-a-dozen for 1d., so I'm obliged to let 'em have three or four,"—*Morning Chronicle*, November 29, 1849.

If by ignorance is meant want of information on matters which, for the due performance of his function, the citizen should understand (and no other definition is to the point), then it is a great error to suppose that ignorance is peculiar to the unenfranchised. Were there no other illustrations, sufficient proof that this ignorance is shared by those on the register, might be gathered from their conduct at elections. Much might be inferred from the tuft-hunting spirit exhibited in the choice of aristocratic representatives. Some doubts might be cast on the penetration of men who, while they complain of the pressure of taxation, send to parliament hordes of military and naval officers, who have an interest in making that taxation still greater. Or the pretensions of the present holders of political power to superior knowledge, might be tested by quotations from the debates of a farmers' market-ordinary, and from those of the assembly into which electoral wisdom is distilled. But without dilating upon these general considerations, let us examine a few of the opinions entertained by the mercantile classes upon State-questions, and see how far these opinions entitle them to a reputation for enlightenment.

"Money is wealth," was the dogma universally held by legislators and economists before the days of Adam Smith; and in conformity with it Acts of Parliament were, by general consent, framed to attract and retain in the country as much coin as possible. Mr. Mill, in the introduction to his *Principles of Political Economy*, assumes that the belief is now extinct. It may be so among philosophers, but it is still prevalent in the trading world. We continue to hear deeds praised as tending to "circulate money"; and, on analyzing the alarm periodically raised that "the money is going out of the country," we find such an occurrence regarded as a disaster in itself, and not simply as indicating that the country is poor in consumable commodities. Is

here not occasion for a little "enlightenment" here?

Again, no small number of respectable people on hearing of a fire, or the mad extravagance of a spendthrift, console themselves with the reflection that such things are "good for trade." Dangerous voters these, if sound political knowledge 's a needless qualification.

Even a professed political economist - Doctor Chalmers - maintains that the revenues of landowners form no deduction from the means of society, seeing that the expenditure of such revenues consists "in a transference to the industrious of sustenance and support for their services"; which proposition amounts to this—that it matters not in the end whether A and his servants B, C, and D, live on the produce of their own industry or on the produce of other men's industry!<sup>1</sup>

There still survives alike amongst rich and poor the belief that the speculations of corn-dealers are injurious to the public. Their anger blinds them to the fact that were not the price raised immediately after a deficient harvest, by the purchases of these large factors, there would be nothing to prevent the people from consuming food at their ordinary rate; which would end in the inadequate supply being eaten up long before the ripening of the next crop. They do not perceive that this mercantile operation is analogous in its effect to putting the crew of a vessel on diminished rations when the stock of provisions is found insufficient to last out the voyage. A somewhat serious error this, for electors to labour under.

<sup>1</sup> No doubt the belief which Dr. Chalmers combats, *viz.*, that the landlord's revenue is wholly consumed by him, is an erroneous one; for, as he points out, the greater portion of it goes to maintain those who directly or indirectly minister to the landlord's wants. But Dr. Chalmers overlooks the fact that did the landlord not exist, the services which such now render to him in return for "sustenance and support," would be rendered, in some other shape, to those producers from whom the landlord's revenue originally came.

What crude theories prevail also respecting the power of a legislature to encourage different branches of industry—"agricultural interests" and other "interests." It is not farmers only who labour under the mistake that their occupation can be made permanently more prosperous than the rest by act of parliament: educated towns-people, too, participate in the delusion; quite forgetting that the greater profitableness artificially given to any particular trade, inevitably draws into that trade such an increased number of competitors as quickly reduces its proffered advantages to the general level, and even for a time below that level. Is not the educator wanted behind the counter and on the farm, as well as in the workshop?

A democracy, properly so called, is a political organization modelled in accordance with the law of equal freedom. And if so, those cannot be called democracies under which, as under the Greek and Roman governments, from four-fifths to eleven-twelfths of the people were slaves. Neither can those be called democracies which, like the constitutions of mediæval Italy, conferred power on the burghers and nobles only. Nor can those even be called democracies which, like the Swiss states, have always treated a certain unincorporated class as political outlaws. Enlarged aristocracies these should be termed; not democracies.

In the earlier stages of civilization, before the process of adaptation has yet produced much effect, the struggle for political equality does not exist. There were no agitations for representative government among the Egyptians, or the Persians, or the Assyrians: with them all disputes were as to who should be despot. By the Hindoos a similar state of things is exhibited to the present hour. The like mental condition was shown during the earlier stages of our own progress. In the middle ages fealty to a feudal lord was accounted a duty, and the assertion of personal

freedom a crime. Rights of man were not then dreamed of. Revolutions were nothing but dynastic quarrels; not what they have been in later times—attempts to make government more popular. And if, after glancing at the changes which have taken place between the far past and the present, we reflect upon the character of modern ideas and agitations—on declarations of rights, liberty of the press, slave-emancipation, removal of religious disabilities, Reform Bills, Chartism, &c., and consider how through all of them there runs a kindred spirit, and how this spirit is manifesting itself, with constantly increasing intensity and universality, we shall see that these facts imply some moral change; and explicable as they are by the growth of this compound faculty responding to the law of equal freedom, it is reasonable to consider them as showing the mode in which such faculty seeks to place social arrangements in harmony with that law.

If a democracy is produced by this agency, so also is it rendered practicable by it. The popular form of government as contrasted with the monarchical, is professedly one which places less restraint upon the individual. In speaking of it we use such terms as *free* institutions, *self-government*, *civil liberty*, all implying this. But the diminution of external restraint can take place only at the same rate as the increase of internal restraint. Conduct has to be ruled either from without or from within. If the rule from within is not efficient, there *must* exist a supplementary rule from without. If, on the other hand, all men are properly ruled from within, government becomes needless, and all men are perfectly free. Now the chief faculty of self-rule being the moral sense, the degree of freedom in their institutions which any given people can bear, will be proportionate to the diffusion of this moral sense among them. And only when its influence greatly predominates can so large an instalment of freedom as a democracy implies become possible.

Lastly, the supremacy of this same faculty affords the only guarantee for the stability of a democracy. On the part of the ruled it gives rise to what we call a jealousy of their liberties—a watchful determination to resist anything like encroachment upon their rights; while it generates among the rulers such respect for these rights as checks any desire they may have to aggress. Conversely, let the ruled be deficient in the instinct of freedom, and they will be indifferent to the gradual usurpation of their privileges so long as it entails no immediate inconvenience upon them; and the rulers, in such case, being deficient in sympathetic regard for these privileges, will be, to a like extent, unscrupulous in usurping. Let us observe, in detail, the different modes in which men thus contra-distinguished comport themselves under a representative form of government. Among a people not yet fitted for such a form, citizens, lacking the impulse to claim equal powers, become careless in the exercise of their franchise, and even pride themselves on not interfering in public affairs.<sup>1</sup> Provided their liberties are but indirectly affected, they will watch the passing of the most insidious measures with vacant unconcern. It is only barefaced aggressions that they can perceive to be aggressions at all. Placing, as they do, but little value on their privileges, they are readily bribed. When threatened, instead of assuming that attitude of dogged resistance which the instinct of freedom dictates, they truckle. If tricked out of a right of citizenship, they are quite indifferent about getting it again; and, indeed, when the exercise of it conflicts with any immediate interest, are glad to give it up,—will even petition, as in times past did many of the corporate towns, both in England and Spain, that they may be excused from electing representatives. Meanwhile, in accordance with that law of social homogeneity lately dwelt upon, those in authority are

<sup>1</sup> Instance the behaviour<sup>4</sup> of the Prussian electors since the late revolution.

in a like ratio ready to encroach. They intimidate, they bribe, they plot ; and by degrees establish a comparatively coercive government. On the other hand, among a people sufficiently endowed with the faculty responding to the law of equal freedom, no such retrograde process is possible. The man of genuinely democratic feeling loves liberty as a miser loves gold, for its own sake and quite irrespective of its apparent advantages. What he thus highly values he sleeplessly watches ; and he opposes aggression the moment it commences. Should any assume undue prerogatives, he straightway steps up to them and demands their authority for so doing. Transactions that seem in the remotest degree underhand awaken his suspicions, which are not laid so long as anything remains unexplained. If in any proposed arrangement there be a latent danger to the liberties of himself and others, he instantly discovers it and refuses his consent. He is alarmed by such a proposal as the disfranchisement of a constituency by the legislature ; for it at once occurs to him that the

measure thus levelled against one may be levelled against many. To call that responsible government under which a cabinet-minister can entangle the nation in a quarrel about some paltry territory before they know anything of it, he sees to be absurd. It needs no chain of reasoning to show him that the assumption, by a delegated assembly, of the power to lengthen its own existence from three years to seven, is an infringement of the representative principle ; and no plausible professions of honourable intentions can check his opposition to the setting up of so dangerous a precedent. Still more excited is he when applied to for grants of public money, with the understanding that on a future occasion he shall be told how they have been spent. Flimsy excuses about "exigencies of the State," and the like, cannot entrap him into so glaring an act of self-stultification. Thus is he ever on the watch to stop encroachment. And when a community consists of men animated by the spirit thus exemplified, the continuance of liberal institutions is certain.

## THE DUTY OF THE STATE

OUR system of jurisprudence takes a very one-sided view of the reciprocal claims of State and subject. It is stringent enough in enforcing the claim of the State against the subject ; but as to the correlative claim of the subject against the State it is comparatively careless. That it recognizes the title of the tax-payer to protection is true ; but it is also true that it does this but partially. From certain infringements of rights, classed as criminal, it is ready to defend every complainant ; but

against others, not so classed, it leaves every one to defend himself. The most trifling injury, if inflicted in a specified manner, is cognizable by the magistrate, and redress may be obtained for nothing ; but if otherwise inflicted, the injury, no matter how serious, must be passively borne, unless the sufferer has plenty of money and a sufficiency of daring. Let a man have his hat knocked over his eyes, and the law will zealously espouse his cause—will mulct his assailant in a fine and costs, and will

do this without charge. But if, instead of having been bonneted he has been wrongfully imprisoned, he is politely referred to a solicitor, with the information that the offence committed against him is actionable ; which means, that if rich he may play double or quits with Fate ; and that if poor he must go without even this chance of compensation. Against picking of pockets, as ordinarily practised, the ruling power grants its lieges gratuitous protection ; but pockets may be picked in various indirect ways, and it will idly look on unless costly means are taken to interest it. It will rush to the defence of one who has been deprived of a few turnips by a half-starved tramp ; but as to the estate on which these turnips grew, that may be stolen without risk, so long as the despoiled owner is left friendless and penniless.<sup>1</sup> Some complaints need only to be whispered, and the State forthwith plays the parts of constable, lawyer, judge, and gaoler ; while to others it turns a deaf ear unless they are made through its bribed hangers-on. Now it is the injured man's champion ; and now it throws down its weapons and seats itself as umpire, while oppressor and oppressed run a tilt at each other.

That men should sit down as apathetically as they do under the present corrupt administration of justice, is not a little remarkable. That we, with all our jealousy of abuses, with all our opportunities of canvassing, blaming, and amending the acts of the legislature, with all our readiness to organize and agitate, with the Anti-Corn-Law, Slavery-Abolition, and Catholic-Emancipation victories fresh in remembrance--that we, the independent, self-ruling English, should daily behold the abominations of our judicial system, and yet do nothing

<sup>1</sup> It is true that a plaintiff who can swear that he is not worth £5, may sue *in forma pauperis*. But this privilege is almost a dead letter. Actions so instituted are usually found to fail, because those who conduct them, having to plead gratuitously, plead carelessly.

to rectify them, is really quite incomprehensible. It is not as though the facts were disputed ; all men are agreed upon them. The dangers of law are proverbial. The names of its officers are used as synonyms for trickery and greediness. The decisions of its courts are typical of chance. In all companies you hear but one opinion ; and each person confirms it by a fresh illustration. Now you are informed of £300 having been expended in the recovery of forty shillings' worth of property ; and again of a cause that was lost because an affirmation could not be received in place of an oath. A right-hand neighbour can tell you of a judge who allowed an indictment to be objected to, on the plea that the words, "in the year of our Lord," were not inserted before the date ; and another to your left narrates how a thief lately tried for stealing a guinea-pig was acquitted, because a guinea-pig was shown to be a kind of rat, and a rat could not be property. At one moment the story is of a poor man whose rich enemy has deliberately ruined him by tempting him into litigation ; and at the next it is of a child who has been kept in prison for six weeks, in default of sureties for her appearance as witness against one who had assaulted her.<sup>1</sup> This gentleman had been cheated out of half his property, but dared not attempt to recover it for fear of losing more, while his less prudent companion can parallel the experience of him who said that he had only twice been on the verge of ruin--once when he had lost a law-suit, and once when he had gained one. On all sides you are told of trickery and oppression, and revenge, committed in the name of justice, of wrongs endured for want of money wherewith to purchase redress ; of rights unclaimed because contention with the powerful usurper was useless ; of chancery-suits that outlasted the lives of the suitors ; of fortunes swallowed up in settling a title ; of estates lost by

<sup>1</sup> The case occurred at Winchester in July, 1849.

an informality. And then comes a catalogue of victims—of those who had trusted and been deceived; gray-headed men whose hardy-earned savings went to fatten the attorney; threadbare and hollow-checked insolvents who lost all in the attempt to get their due; some who had been reduced to subsist on the charity of friends; others who had died the death of a pauper; with not a few whose anxieties had produced insanity, or who in their desperation had committed suicide. Yet, while all echo one another's exclamations of disgust, these iniquities continue unchecked!

There are not wanting, however, men who defend this state of things who actually argue that government should perform but imperfectly what they allow to be its special function. While, on the one hand, they admit that administration of justice is the vital necessity of civilized life, they maintain, on the other, that justice may be administered too well! "For," say they, "were law cheap, all men would avail themselves of it. Did there exist no difficulty in obtaining justice, justice would be demanded in every case of violated rights. Ten times as many appeals would be made to the authorities as now. Men would rush into legal proceedings on the slightest provocation; and litigation would be so enormously increased as to make the remedy worse than the disease."

Such is the argument: an argument involving either a gross absurdity or an unwarrantable assumption. For observe, when this great multiplication of law-proceedings under a gratuitous administration of justice, is urged as a reason why things should remain as they are, it is implied that the evils attendant upon the rectification of all wrongs, would be greater than are the evils attendant upon submission to those wrongs. Either the great majority of civil aggressions must be borne in silence as now, or must be adjudicated upon as then; and the allegation is that the first alternative is

preferable. But if ten thousand litigations are worse than ten thousand injustices, then one litigation is worse than one injustice. Which means that, as a general principle, an appeal to the law for protection is a greater evil than the trespass complained of! Which means that it would be better to have no administration of justice at all! If, for the sake of escaping this absurdity, it be assumed that, as things now are, all *great* wrongs are rectified,—that the costliness of law prevents insignificant ones only from being brought into court, and that consequently the above inference cannot be drawn; then, either denial is given to the obvious fact that, by the poverty they inflict, many of the greatest wrongs incapacitate their victims from obtaining redress, and to the obvious fact that the civil injuries suffered by the masses, though *absolutely* small are *relatively* great; or else it is taken for granted that on nine-tenths of the population, who are too poor to institute legal proceedings, no civil injuries of moment are ever inflicted!

Nor is this all. It is not true that making the law easy of access would increase litigation. An opposite effect would be produced. The prophecy is vitiated by that very common mistake of calculating the result of some new arrangement on the assumption that all other things would remain as they are. It is taken for granted that under the hypothetical *régime* just as many transgressions would occur as at present. Whereas any candid observer can see that most of the civil offences now committed, are committed *in consequence* of the inefficiency of our judicial system;

"For sparing justice feeds iniquity."

It is the difficulty which he knows there will be in convicting him which tempts the knave to behave knavishly. Were not the law so expensive and so uncertain, dishonest traders would never risk the many violations of it they now do. The trespasses of the wealthy against the poor would be rare, were it not that the

aggrieved have practically no remedy. Mark how, to the man who contemplates wronging his fellow, our legal system holds out promises of impunity. Should his proposed victim be one of small means, there is the likelihood that he will not be able to carry on a law-suit: here is encouragement. Should he possess enough money, why, even then, having, like most people, a great dread of litigation, he will probably bear his loss unresistingly: here is further encouragement. Lastly, our plotter remembers that, should his victim venture an action, judicial decisions are very much matters of accident, and that the guilty are often rescued by clever counsel: here is still more encouragement. And so, all things considered, he determines to chance it. Now, he would never decide thus were legal protection efficient. Were the administration of law prompt, gratuitous, and certain, those probabilities and possibilities which now beckon him on to fraudulent acts would vanish. Only in cases where both parties sincerely believed themselves right, would judicial arbitration be called for; and the number of such cases is comparatively small. Litigation, therefore, so far from *increasing* if justice were made easy of obtainment, would probably *decrease*.

But, after all, it is not the setting up of this or that system of jurisprudence which causes the intercourse of men with one another to be equitable or otherwise. The matter lies deeper. As with forms of government, so with forms of law, it is the national character that decides. The power of an apparatus primarily depends, not on the ingenuity of its design, but on the strength of its materials. Be his plan never so well devised, yet if our engineer has not considered whether the respective parts of his structure will bear the strains to be put upon them, we must call him a bungler. Similarly with the institution-maker. If the people with whom he has to deal are not of the equisite quality, no cleverness in his

contrivance will avail anything. Let us not forget that institutions are *made* of men, and that frame them together as we may, it is their nature which must finally determine whether the institutions can stand. These social forms which we regard as all-potent, are things of quite secondary importance. What mattered it that the Roman plebeians were endowed with certain privileges, when the patricians prevented them from exercising those privileges by ill-treatment carried even to the death? What mattered it that our statute-book contained equitable provisions, and that officers were appointed to enforce them, when there needed a Magna Charta to demand that justice should neither be sold, denied, nor delayed? What matters it even now, that all men are declared equal before the law, when magistrates are swayed by class-sympathies, and treat a gentleman more leniently than an artizan? If we think that we can rectify the relationships of men at will, we deceive ourselves. What Sir James Mackintosh says of constitutions—that they are not made but grow—applies to all social arrangements. It is not true that once upon a time men said—“Let there be law”; and there was law. Administration of justice was originally impracticable, Utopian, and has become more and more practicable only as men have become less savage. The old system of settling disputes by personal contest, and the new system of settling them by State-arbitration, have co-existed throughout all ages: the one little by little taking the place of the other—outgrowing it. The feudal baron with castle and retainers maintained his own rights, and would have considered himself disgraced by asking legal aid. Even after he had agreed to regard his suzerain as umpire, it was still in the lists, and by the strength of his arm and his lance, that he made good his cause. And when we remember that equally among lords and labourers this practice long lingered,—that until lately we had duels, for which it was thought dishonourable for

gentlemen to avoid by applying to a magistrate, and that even still we have pugilistic fights which the people try to hide from the police ; we are taught that it is impossible for a judicial system to become efficient faster than men become good. It is only after public morality has gained a certain ascendancy, that the civil power gets strong enough to perform its simplest functions. Before this it cannot even put down banditti ; border forays continue in spite of it ; and it is bearded in its very strongholds, as, among ourselves, by the thieves of Whitefriars but two centuries ago. Under early governments the officers of law are less friends than enemies. Legal forms are commonly used for purposes of oppression. Causes are decided by favouritism, bribery, and backstairs intrigue. The judicial apparatus breaks down under the work it has to do ; and shows us in a Jonathan Wild, a Judge Jeffries, and even a Lord Chancellor Bacon, how inevitably its several parts are rendered inoperative by a generally-diffused wickedness. And when we read of Orange magistrates who become aggressors rather than protectors ; of policemen who conspire with one another to obtain convictions that they may be promoted ; and of the late Palace Court, whose officers habitually favoured the plaintiff, with the view of inducing men to enter suits there, we find that now, as of old, judicial protection is vitiated by the depravity of the age.

The civil power no more does what to the careless eye it seems to do, than the juggler really performs his apparent miracles. It is impossible for man to create force. He can only alter the mode of its manifestation, its direction, its distribution. The power which propels his steamboats and locomotives is not of his making ; it was all lying latent in the coal. He telegraphs by an agent set free during the oxidation of zinc, but of which no more is obtained than is due to the number of atoms that have combined. The very energy he expends in

moving his arm is generated by the chemical affinities of the food he eats. In no case can he do anything but avail himself of dormant forces. This is as true in ethics as in physics. Moral feeling is a force a force by which men's actions are to be restrained within certain bounds ; and no legislative mechanism can really increase its results. By how much this force is deficient, by so much must its work remain undone. In whatever degree we lack the qualities needful for our state, in the same degree must we suffer. Nature will not be cheated. Whoso should think to escape the influence of gravitation by throwing his limbs into some peculiar attitude, would not be more deceived than are those who hope to avoid the weight of their depravity by arranging themselves into this or that form of political organization. Every jot of the evil must in one way or other be borne--consciously or unconsciously ; either in a shape that is recognized, or else under some disguise. No philosopher's stone of a constitution can produce golden conduct from leaden instincts. No apparatus of senators, judges, and police, can compensate for the want of an internal governing sentiment. No legislative manipulation can eke out an insufficient morality into a sufficient one. No administrative sleight of hand can save us from ourselves.

But must not this imply that government is of no use whatever ? Not at all. Although unable to alter the sum-total of injustice to be supported, it can still alter its *distribution*. And this is what it really does. By its aid, men to a considerable extent equalize the evil they have to bear--spread it out more uniformly over the whole community, and over the life of each citizen. Entire freedom to exercise the faculties, interrupted by entire deprivations of it, and marred by the perpetual danger of these deprivations, is exchanged for a freedom on which the restrictions are constant but partial. Instead of those losses of life, of limb, or of the means of subsist-

ence, which, under a state of anarchy, all are liable to, and many suffer, a political organization commits universal aggressions of a comparatively mild type. Wrongs that were before occasional but crushing, are now unceasing but bearable. The system is one of mutual insurance against moral disasters. Just as men, while they cannot prevent fires and shipwrecks, can yet guarantee one another against ruin from these, by bearing them in common, and distributing the injuries entailed over long periods of time; so, although by uniting together for judicial purposes men cannot diminish the amount of injustice to be borne, they can, and do, insure themselves against its otherwise fatal results.

When we agreed that it was the essential function of the State to protect—to administer the law of equal freedom—to maintain men's rights; we virtually assigned to it the duty, not only of shielding each citizen from the trespasses of his neighbours, but of defending him, in common with the community at large, against foreign aggressions. An invading force may violate people's rights as much as, or far more than, an equal body of felons; and our definition requires that government shall resist transgression in the one case as much as in the other. Protection,—this is what men seek by political combination; and whether it be against internal or external enemies matters not. Unquestionably war is immoral. But so likewise is the violence used in the execution of justice; so is all coercion. Ethical law is as certainly broken by the deeds of judicial authorities as by those of a defensive army. There is, in principle, no difference whatever between the blow of a policeman's baton and the thrust of a soldier's bayonet. Both are infractions of the law of equal freedom in the persons of those injured. In either case we have force sufficient to produce submission; and it matters not whether that force be employed by a man in red or by one in blue. Policemen are soldiers who act

alone; soldiers are policemen who act in concert. Government employs the first to attack in detail ten thousand criminals who separately make war on society; and it calls in the last when threatened by a like number of criminals in the shape of drilled troops. Resistance to foreign foes and resistance to native ones having consequently the same object—the maintenance of men's rights, and being effected by the same means—force, are in their nature identical; and no greater condemnation can be passed on the one than on the other. The doings of the battle-field merely exhibit in a concentrated form that immorality which is inherent in government, and attaches to all its functions. What is so manifest in its military acts is true of its civil acts,—it uses wrong to put down wrong.

Defensive warfare (and of course it is solely to this that the foregoing agreement applies) must therefore be tolerated as the least of two evils. There are indeed some who unconditionally condemn it, and would meet invasion by non-resistance. To such there are several replies.

First, consistency requires them to behave in like fashion to their fellow-citizens. They must not only allow themselves to be cheated, assaulted, robbed, wounded, without offering active opposition, but must refuse help from the civil power; seeing that they who employ force by proxy, are as much responsible for it as though they employed it themselves.

Again, such a theory makes pacific relationships between men and nations look needlessly Utopian. If all agree not to aggress, they must as certainly be at peace with each other as though they had all agreed not to resist. So that, while it sets up so difficult a standard of behaviour, the rule of non-resistance is not one whit more efficient as a preventive of war, than the rule of non-aggression.

Moreover, this principle of non-resistance is not deducible from the moral

law. The moral law says—Do not aggress. It cannot say—Do not resist; for to say this would be to presuppose its own precepts broken. As explained at the outset, Morality describes the conduct of perfect men; and cannot include in its premises circumstances that arise from imperfection. That rule which attains to universal sway when all men are what they ought to be, must be the right rule, must it not? And that rule which then becomes impossible of fulfilment must be the wrong one? Well, in an ideal State the law of non-aggression is obeyed by all—is the vital principle of every one's conduct—is fully carried out, reigns, lives; whereas in such a State the law of non-resistance necessarily becomes a dead letter.

Lastly, it can be shown that non-resistance is absolutely wrong. We may not carelessly abandon our dues. We may not give away our birthright for the sake of peace. If it be a duty to respect other men's claims, so also is it a duty to maintain our own. That which is sacred in their persons is sacred in ours also. Have we not a faculty which makes us feel and assert our title to freedom of action, at the same time that, by a reflex process, it enables us to appreciate the like title in our fellows? Did we not find that this faculty can act strongly on behalf of others, only when

it acts strongly on our own behalf? And must we assume that, while its sympathetic promptings are to be diligently listened to, its direct ones are to be disregarded? No: we may not be passive under aggression. In the due maintenance of our claims is involved the practicability of our duties.

Of international arbitration we must say, as of a free constitution, or a good system of jurisprudence, that its possibility is a question of time. The same causes which once rendered all government impossible have hitherto forbidden this widest extension of it. A federation of peoples—a universal society, can exist only when man's adaptation to the social state has become tolerably complete. We have already seen that in the earliest stage of civilization, when the repulsive force is strong, and the aggregative force weak, only small communities are possible. A modification of character causes these *gentes*, and tribes, and feudal lordships, and clans, to coalesce into nations; and a still further modification will allow of a still further union.

Meanwhile, in looking forward to some all-embracing federal arrangement, we must keep in mind that the stability of so complicated a political organization depends, not upon the fitness of one nation but upon the fitnesses of many.

## THE LIMIT OF STATE-DUTY

A FUNCTION to each organ and each organ to its own function, is the law of all organization. To do its work well, an apparatus must possess special fitness for that work; and this implies unfitness for any other work. The lungs cannot digest, the heart cannot respire,

the stomach cannot propel blood. Each muscle and each gland must have its own particular nerve. There is not a fibre in the body but what has a channel to bring it food, a channel to take the surplus away, an agency for stimulating it to perform its peculiar duty, and a

mechanism to take away effete matter. Between creatures of the lowest type and creatures of the highest, we similarly find the essential difference to be, that in the one the vital actions are carried on by a few simple agents, while in the other the vital actions are severally decomposed into their component parts, and each of these parts has an agent to itself. In organizations of another order the same principle is apparent. When the manufacturer discovered that by confining each of his workmen wholly to one process, he could greatly increase the productive powers of his establishment, he did but act on this same rule of one function to one organ. If we compare the mercantile arrangements of a village with those of a city, we shall find that the hucksters of the one carry on many trades each, while most shopkeepers of the other confine themselves to single trades; showing us how a highly-developed apparatus for the distribution of commodities is similarly distinguished by the subdivision of duties. Language, too, exemplifies the same truth. Between its primitive state, in which it consisted of nothing but nouns, used vaguely to indicate all ideas indiscriminately, and its present state, in which it consists of numerous "parts of speech," the process of growth has been that of gradually separating words into classes serving different purposes; and just as fast as this process has advanced, has language become capable of adequately fulfilling its end.<sup>1</sup>

May we not, then, suspect that the assigning of one function to one organ, is the condition of efficiency in all instrumentalities? If, as far as we can see, such is the law not only of natural organizations, but of what, in a superficial sense, we call artificial ones, does it not seem probable that it is the

<sup>1</sup> Until now (1890) that I am re-reading *Social Statics* for the purpose of making this abridgment, the above paragraph had remained for these 40 years unremembered. It must have been written in 1849; and it shows that at that date I had entered on the line of thought which, pursued in after years, led to the general law of evolution.

universal law? Will it not be the law of institutions? Will it not be the law of the State? Must we not expect that with a government also, special adaptation to one end implies non-adaptation to other ends? And is it not likely that by devolving on a government additional functions, the due discharge of its peculiar function will be sacrificed? And would not this imply that a government ought not to undertake such additional functions?

But laying aside analogy, let us inquire whether it is not the fact that in assuming any office besides its essential one, the State begins to lose the power of fulfilling its essential one. So long as our joint-stock protection-society confines itself to guaranteeing the rights of its members, it is pretty certain to be co-extensive with the nation; for while such an organization is needed at all, most men will sacrifice something to secure its guardianship. But let an additional duty be assigned to it, and there will immediately arise more or less schism. Observe how the matter stands between the government and the dissentient citizen. Says the citizen:

"What is it that you, as the ruling agency, have been appointed for? Is it not to maintain the rights of those who employ you; or, in other words, to guarantee to each the fullest freedom for the exercise of his faculties compatible with the equal freedom of all others?"

"It has been so decided."

"And it has been also decided that you are justified in diminishing this freedom only to such an extent as may be needful for preserving the remainder, has it not?"

"That is evidently a corollary."

"Exactly. And now let me ask what is this property, this money, of which, in the shape of taxes, you are demanding from me an additional amount for a further purpose? Is it not that which enables me to get food, clothing, shelter, recreation, or, to repeat the original expression—that on which I depend for the exercise of most of my faculties?"

"It is."

"Therefore to decrease my property is to decrease my freedom to exercise my faculties, is it not?"

"Clearly."

"Then this new impost of yours will practically decrease my freedom to exercise my faculties?"

"Yes."

"Well, do you not now perceive the contradiction? Instead of acting the part of a protector you are acting the part of an aggressor. What you were appointed to guarantee me and others, you are now taking away. To see that the liberty of each man to pursue the objects of his desires is unrestricted, save by the like liberty of all, is your special function. To diminish this liberty by means of taxes, or civil restraints, more than is needful for performing such function, is wrong, because adverse to the function itself. Now your new impost does so diminish this liberty more than is needful, and is consequently unjustifiable."

It will perhaps be urged, however, that the evil done by a government, when it thus oversteps its original duty, is only an apparent one: seeing that although it diminishes men's spheres of action in one direction, it adds to them in another. All such supplementary functions, an objector may say, subserve in some way or other the wants of society; that is, they facilitate the satisfaction of men's desires; that is, they afford to men greater freedom for the exercise of their faculties. For if you argue that taking away a man's property diminishes his freedom to exercise his faculties, because it diminishes his *means* of exercising them, then you must in fairness admit that, by procuring for him certain of the objects he desires, or by taking away the obstacles that lie between him and those objects, or by otherwise helping him to his ends, the State is increasing his power to exercise his faculties, and hence is practically increasing his freedom.

To all which the answer is, that cut-

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ting away men's opportunities on one side, to add to them on another, is at best accompanied by a loss. Let us remember that the force by which a society, through its government, works out certain results, is not increased by administrative mechanisms, but that part of it escapes in friction. Government evidently cannot *create* any facilities for the exercise of faculties; all it can do is to re-distribute them. Set down the amount of power to satisfy his wants, which it takes from a citizen in extra taxes; deduct the serious waste occurring under official manipulations; and the remainder, transformed into some new shape, is all that can be returned to him. The transaction is consequently a losing one. So that while, in attempting to serve the public by undertaking supplementary functions, a government fails in its duty towards all who dissent; it does not really compensate for this by additional advantages afforded to the rest; to whom it merely gives with one hand, less than it takes away with the other.

But in truth the transaction is a yet more detrimental one than it thus appears, for even the gift is a delusion. The expediency-philosophy, of which this general State-superintendence is a practical expression, embodies the belief that government ought not only to guarantee men the unmolested pursuit of happiness, but should provide the happiness for them. Now no scheme could be more self-defeating. Man, as briefly delineated at the outset (p. 13), consists of a congeries of faculties qualifying him for surrounding conditions. Each of these faculties, if normally developed, yields to him, when exercised, a gratification constituting part of his happiness; while in the act of exercising it, some deed is done subserving the wants of the man as a whole, and affording to the other faculties the opportunities of performing in turn their respective functions, and of producing every one its peculiar pleasure: so that,

when healthily balanced, each subserves all and all subserve each. We cannot live at all unless this mechanism works with some efficiency; and we can live entirely only when the reciprocity between capacities and requirements is perfect. Evidently, then, one who is thus rightly constituted cannot be helped. To do anything for him by some artificial agency, is to supersede certain of his powers—is to leave them unexercised, and therefore to diminish his happiness.

"But men are *not* complete; they are *not* healthily developed; they have *not* capacities in harmony with their wants; and therefore, as matters stand, a government does *not* by its interpositions pre-occupy offices which there are faculties *to fill*." Very true; but next to being what we ought to be, the most desirable thing is that we should become what we ought to be as fast as possible. We have to lose the characteristics which fitted us for our original state, and to gain those which will fit us for our present state; and the question to be asked, respecting these mechanical remedies for our deficiencies, is, do they facilitate the change? A moment's thought will convince us that they retard it. Demand and supply is the law of life as well as the law of trade. Would you draw out and increase some feeble sentiment? Then you must set it to do, as well as it can, the work required of it. It must be kept ever active, ever strained, ever inconvenienced by its incompetence. Under this treatment it will, in the slow course of generations, attain to efficiency; and what was once its impossible task will become the source of a healthy, pleasurable, and desired excitement. But let a State-instrumentality be thrust between such faculty and its work, and the process of adaptation is at once suspended. The embryo agency now superseded by some commission—some board and staff of officers, straightway dwindles; for power is as inevitably lost by inactivity as it is gained by activity. Hence, humanity no longer goes on moulding itself into harmony with the natural requirements of the

social state; but begins, instead, to assume a form fitting these artificial requirements. And thus, as before said, not only does a government reverse its function by taking away more property than is needful for protective purposes, but even what it gives, in return for the excess so taken, is in essence a loss.

There is indeed one faculty, or rather combination of faculties, for whose shortcomings the State, as far as in it lies, may advantageously compensate—that, namely, by which society is made possible. It is clear that any being whose constitution is to be moulded into fitness for new conditions of existence, must be placed under those conditions. This granted, it follows that as man has been, and is still, deficient in those feelings which prevent the recurring antagonisms of individuals and their consequent disunion, some artificial agency is required by which their union may be maintained. Only by the process of adaptation itself can be produced that character which makes social equilibrium spontaneous. And hence, while this process is going on, an instrumentality must be employed, firstly, to bind men into the social state, and secondly to check all conduct endangering the existence of that state. Such an instrumentality we have in a government.

And now mark that whether we consider government from this point of view, or from that previously occupied, our conclusions respecting it are in essence identical. For when government fulfils the function here assigned it, of retaining men in the circumstances to which they are to be adapted, it fulfils the function which we on other grounds assigned it—that of protector. To administer justice,—to mount guard over men's rights,—is simply to render society possible. And seeing that the two definitions are thus at root the same, we shall be prepared for the fact that, in whichever way we specify its duty, the State cannot exceed that duty without defeating itself. For, if regarded as a protector, we find that the

moment it does anything more than protect, it becomes an aggressor instead of a protector; and, if regarded as a help to adaptation, we find that when it does anything more than sustain the social state, it retards adaptation instead of hastening it.

To the assertion that the boundary line of State-duty as above drawn is at the wrong place, the obvious rejoinder is—show us where it should be drawn. This appeal the expediency-philosophers have never yet been able to answer. Their alleged definitions are no definitions at all. As was proved at the outset, to say that government ought to do that which is “expedient,” or to do that which will tend to produce the “greatest happiness,” or to do that which will subserve the “general good,” is to say just nothing; for there are countless disagreements respecting the natures of these desiderata. A definition of which the terms are indefinite is an absurdity. Whilst the practical interpretation of “expediency” remains a matter of opinion, to say that a government should do that which is “expedient” is to say that it should do, what we think it should do!

Still then our demand is—a definition. Between the two extremes of its possible action, where lies the proper limitation? Shall it extend its interference to the fixing of creeds, as in the old times; or to overlooking modes of manufacture, farming operations, and domestic affairs, as it once did; or to commerce, as of late—to popular education, as now—to public health, as already—to dress, as in China—to literature, as in Austria—to charity, to manners, to amusements? If not to all of them, to which of them? Should the perplexed inquirer seek refuge in authority, he will find precedents not only for these but for many more such interferences. If, like those who disapprove of master tailors having their work done off the premises, or like those who want to prevent the produce of industrial

prisons displacing that of the artizans, or like those who would restrain charity-school children from competing with seamstresses, he thinks it desirable to meddle with trade-arrangements, there are plenty of exemplars for him. There is the law of Henry VII., which directed people at what fairs they should sell their goods; and that of Edward VI., which enacted a fine of £100 for a usurious bargain; and that of James I., which prescribed the quantity of ale to be sold for a penny; and that of Henry VIII., which made it penal to sell any pins but such as are “double-headed, and their head soldered fast to the shank, and well smoothed; the shank well shaven; the point well and round-filed and sharpened.” He has the countenance, too, of those enactments which fixed the wages of labour; and of those which dictated to farmers, as in 1533, when the sowing of hemp and flax was made compulsory; and of those which forbade the use of certain materials, as that now largely-consumed article, log-wood, was forbidden in 1597. If he approves of so extended a superintendence, perhaps he would adopt M. Louis Blanc’s idea that “government should be considered as the supreme regulator of production”; and, having adopted it, push State-control as far as it was once carried in France, when manufacturers were pilloried for defects in the materials they employed, and in the textures of their fabrics; when some were fined for weaving of worsted a kind of cloth which the law said should be made of mohair, and others because their camlets were not of the specified width; and when a man was not at liberty to choose the place for his establishment, nor to work at all seasons, nor to work for everybody. Is this considered too detailed an interference? Then, perhaps, greater favour will be shown to those German regulations by which a shoemaker is prevented from following his craft until an inspecting jury has certified his competence; which disable a man who has chosen one calling from ever

adopting another; and which forbid any foreign tradesman from settling in a German town without a licence. And if work is to be regulated, is it not proper that work should be provided, and the idle compelled to perform a due amount of it? In which case how shall we deal with our vagrant population? Shall we take a hint from Fletcher of Saltoun, who warmly advocated the establishment of slavery in Scotland as a boon to "so many thousands of our people who are at this day dying for want of bread"? or shall we adopt the analogous suggestion of Mr. Carlyle, who would remedy the distresses of Ireland by organizing its people into drilled regiments of diggers? The hours of labour too—what must be done about these? Having acceded to the petition of the factory-workers, ought we not to entertain that of the journeyman-bakers? and if that of the journeyman-bakers, why not, as Mr. Cobden asks, consider the cases of the glass-blowers, the nightmen, the iron-founders, the Sheffield knife-grinders, and indeed all other classes, including the hardworked M.P.'s themselves? And when employment has been provided, and the hours of labour fixed, and trade regulations settled, we must decide how far the State ought to look after people's minds, and morals, and health. There is this education question: having satisfied the prevalent wish for government schools with tax-paid teachers, and adopted Mr. Ewart's plan for town libraries and museums, should we not canvass the supplementary proposal to have national lecturers? and if this proposal is assented to, would it not be well to carry out the scheme of Sir David Brewster, who desired to have "men ordained by the State to the undivided functions of science"—"an intellectual priesthood," "to develop the glorious truths which time and space embosom"?<sup>1</sup> Then having established an "intellectual priesthood" to keep company with our religious one, a priesthood

of physic, such as is advocated by certain feeless medical men, and of which we have already the germ in our union doctors, would nicely complete the trio. And when it had been agreed to put the sick under the care of public officials, consistency would of course demand the adoption of Mr. G. A. Walker's system of government funerals, under which "those in authority" are "to take especial care" that "the poorest of our brethren" shall have "an appropriate and solemn transmission" to the grave, and are to grant in certain cases "gratuitous means of interment." Having carried out thus far the communist plan of doing everything for everybody, should we not consider the people's amusements, and taking example from the opera-subsidy in France, establish public ball rooms, and *gratis* concerts, and cheap theatres, with State-paid actors, musicians, and masters of the ceremonies using care at the same time duly to regulate the popular taste, as indeed, in the case of the Art-Union subscribers, our present Government proposed to do? Speaking of taste naturally reminds us of dress, in which sundry improvements might be enforced; for instance the abolition of hats: we should have good precedents either in Edward IV., who fined those wearing "any gown or mantell" not according to specification, and who limited the superfluity of people's boot-toes, or in Charles II., who prescribed the material for his subjects' grave-clothes. The matter of health, too, would need attending to: and, in dealing with this, might we not profitably reconsider those ancient statutes which protected peoples' stomachs by restricting the expenses of their tables, or, remembering how injurious are our fashionable late hours, might we not advantageously take a hint from the old Norman practice (otherwise prompted), and fix the time at which people should put out their fires and go to bed; or might we not with benefit act upon the opinion of M. Beausobre, a statesman who said it was "proper to watch during

<sup>1</sup> See Address to the British Association at Edinburgh, in 1850.

the fruit season, lest the people eat that which is not ripe"? And then, by way of making the superintendence complete, would it not be well to follow the example of the Danish king who gave directions to his subjects how they should scour their floors and polish their furniture?

Multiply these questions; add to them the endless subordinate ones to which they must give rise; and some idea may be formed of the maze through which the expediency-philosopher has to find his way. Where now is his clue? If he would escape the charge of political empiricism, he must show us some test by which he can in each case ascertain whether or not State-superintendence is desirable. Between the one extreme of entire non-interference, and the other extreme in which every citizen is to be transformed into a grown-up baby, there lie innumerable stopping places; and he who would have the State do more than protect, is required to say where he means to draw the line, and to give us reasons why it must be just there and nowhere else.

After the difficulty of finding out the thing to be done, comes the other difficulty of finding out the way to do it. Let us excuse the expediency-philosopher one half of his task—let us assume something to be unanimously agreed to as a proper undertaking; and now suppose we inquire of him—How about your means of accomplishing it? Are you quite sure that your apparatus will not break down under its work? quite sure that it will produce the result you wish? quite sure that it will not produce some very different result? There is no lack of warnings. "Let us put down usury," said to themselves the rulers of the middle ages. They tried, and did just the reverse of what they intended; for it turned out that "all regulations interfering with the interest of money render its terms more rigorous and burdensome." "We will exterminate Protestantism," whispered the Continental Catholics to one another. They tried,

and instead of doing this they planted in England the germs of a manufacturing organization which has to a great extent superseded their own. "It will be well to give the labouring classes fixed settlements," thought the Poor-Law legislators; and, having acted out this thought, there eventually grew up the clearance system, with its overcrowded cottages and non-resident labour-gangs. "We must suppress these brothels," decided the authorities of Berlin in 1845. They did suppress them; and in 1848, the registrar's books and the hospital returns prove matters to be considerably worse than before.<sup>1</sup> "Suppose we compel the London parishes to maintain and educate their pauper children in the country," said statesmen in the time of George III; "it would greatly tend to the preservation of the lives of the infant parish poor." So they passed the 7 George III., c. 39; and by-and-by there began the business of child-farming, ending in the Tooting tragedy. Are not such warnings worthy of attention?

Then as to his administrative mechanisms can he answer for the satisfactory working of them? The common remark that public business is worse managed than all other business, is not altogether unfounded. To-day he will find it illustrated in the doings of a department which makes a valuable estate like the New Forest, a loss to the country of £3,000 a year; which allowed Salcey Forest to be wholly cut down and made away with by a dishonest agent; and which, in 1848, had its accounts made up to March, 1839, only. Tomorrow he may read of Admiralty bunglings—of ships ill-built, pulled to pieces, re-built, and patched; and of a sluggishness which puts the national dockyards "about seven years" behind all others. Now the exposure is of an extravagance which erects gaols at a cost of £1,200 per prisoner; and now of a carelessness which permits important legal records to rot among rubbish.

<sup>1</sup> Reports of Dr. Fr. J. Behrend. See *Medical Times*, March 16, 1850

Here is a sailor of whom the State demanded sixpence a month towards a hospital which was never provided, and whose pension from the Merchant-Seamen's Fund is nothing like what it would have been from an ordinary insurance society; and there, on the other hand, is a Mintmoneyer who gets more than £4,000 a year for doing what a tithe of the amount would amply pay for. Official delay is seen in the snail-paced progress of the Museum Catalogue; official mismanagement in the building of Houses of Parliament not fit for speaking in; and official perversity in the opposition always made to improvements by the Excise, the Customs, and the Post-Office authorities. Does the expediency-philosopher feel no apprehensions on contemplating such evidence? Or, as one specially professing to be guided by experience, does he think that on the whole experience is in his favour?

"It is a gross delusion to believe in the sovereign power of political machinery," says M. Guizot. True: and it is not only a gross delusion but a very dangerous one. Let a people believe in government-omnipotence, and they will be pretty certain to get up revolutions to achieve impossibilities. Between their exorbitant ideas of what the State ought to do for them on the one side, and its miserable performances on the other, there will surely be generated feelings extremely inimical to social order.

But this belief in "the sovereign power of political machinery" is not born with men; they are taught it. And how are they taught it? Evidently by these preachers of universal legislative superintendence, and by having seen, from their childhood, all kinds of functions undertaken by government officials. The idea which, in his comment upon the late events in France, M. Guizot calls a "gross delusion," is an idea which he, in common with others, has been practically inculcating. He has kept in action, and in some cases even extended, that

system of official supervision to which this idea owes its birth. Was it not natural that men living under the regulation of legions of prefects, sub-prefects, inspectors, controllers, intendants, commissioners, and other civil employés to the number of 535,000—men who were educated by the government, and taught religion by it—who had to ask its consent before they could stir from home—who could not publish a handbill without a permit from the authorities, nor circulate a newspaper after the censor's veto—who daily saw it dictating regulations for railways, inspecting and managing mines, building bridges, making roads, and erecting monuments—who were led to regard it as the patron of science, literature, and the fine arts, and as the dispenser of honours and rewards—who found it undertaking the manufacture of gunpowder, superintending the breeding of horses and sheep, playing the part of public pawnbroker, and monopolizing the sale of tobacco and snuff—who saw it attending to everything, from the execution of public works down to the sanitary inspection of prostitutes; was it not natural that men so circumstanced should acquire exalted ideas of State power? And, having acquired such ideas, were they not likely to desire the State to compass for them unattainable benefits; to get angry because it did not do this; and to attempt by violent means the enforcement of their wishes?<sup>1</sup> Evidently the reply must be affirmative. And if so, it is not too much to say that this overstepping of the proper sphere of government, leading as it does to

<sup>1</sup> Just in time—just while I have before me these pages of this revised edition, there comes a striking verification. *A propos* of the measures now being taken for dealing with the famine, and the effects produced on the minds of the peasants, a report from Russia in *The Standard* for 28th November, 1891, says:—"The peasant says to himself that the Czar has fed him up to now, and shall continue to feed him. In one case I hear that an official who endeavoured to explain the impossibility of this was met by the reply,—'If our Czar cannot feed us, we will have a Czar who can.'"

that "gross delusion," a belief in "the sovereign power of political machinery," is the natural forerunner of such schemes as those of Blanc and Cabet, and of that confusion which the attempt to realize them by State-agency must produce.

There are other modes, too, in which social stability is endangered by this interference system. It is a very expensive system. The further it is carried the larger become the revenues required; and we all know that heavy taxation is inseparable from discontent. Moreover, it is in its nature essentially despotic. In governing everything it unavoidably cramps men; and, by diminishing their liberty of action, angers them. It galls by its infinity of ordinances and restrictions; it offends by professing to help those whom it will not allow to help themselves; and it vexes by its swarms of dictatorial officials, who are for ever stepping in between men and their pursuits. Those regulations by which the French manufacturers were hampered during the last century, when the State decided on the persons to be employed,

the articles to be made, the materials to be used, and the qualities of the products —when inspectors broke the looms and burnt the goods that were not made according to law; when improvements were illegal and inventors were fined; had no small share in producing the great revolution. Nor, among the causes which conspired to overthrow the government of Louis Philippe, must we forget the irritation generated by an analogous supervision, under which a mine cannot be opened without the permission of the authorities; under which a bookseller or printer may have his business suspended by the withdrawal of his licence; and under which it is penal to take a bucket of water out of the sea.

Thus, if we regard government as a means of upholding the social state, we find that, besides suffering a *direct* loss of power to perform its duty on attempting anything else, there are several subsidiary ways in which the assumption of additional functions endangers the fulfilment of its original function.

## THE REGULATION OF COMMERCE

In putting a veto upon any commercial intercourse, or in putting obstacles in the way of any such intercourse, a government trenches upon men's liberties of action; and by so doing directly reverses its function. To secure for each man the fullest freedom to exercise his faculties compatible with the like freedom of all others, we find to be the State's duty. Now trade-prohibitions and trade-restrictions not only do not secure this freedom, but they take it away. So that in enforcing them the State is transformed from a maintainer of rights into

a violator of rights. If it be criminal in a civil power commissioned to shield us from murder to turn murderer itself; if it be criminal in it to play the thief, though set to keep off thieves; then must it be criminal in it to deprive men, in any way, of liberty to pursue the objects they desire, when it was appointed to insure them that liberty.

We saw that as unjust institutions derive their viciousness from moral defects in the people living under them, they must be *uniformly* pervaded by that viciousness—that as social laws,

debating) whether baptism does or does not regenerate—when, in short, it has settled all those controversies which have split mankind into innumerable sects, it ought to assert that its judgment is beyond appeal. There is no alternative. Unless the State says this, it convicts itself of the most absurd inconsistency. Only on the supposition of infallibility can its ecclesiastical doings be made to seem tolerable. How else shall it demand rates and tithes of the dissenter? “Are you quite sure about these doctrines of yours?” inquires the dissenter. “No,” replies the State; “not quite sure, but nearly so.” “Then it is just possible you may be wrong, is it not?” “Yes.” “And it is just possible that I may be right, is it not?” “Yes.” “Yet you threaten to inflict penalties upon me for nonconformity! You seize my goods; you imprison me if I resist; and all to force from me the means to preach up doctrines which you admit may be false, and, by implication, to preach down doctrines which you admit may be true!”

Evidently, therefore, if the State persists, the only position open to it is that its judgment *cannot* be mistaken. And now observe, that if it says this, it stands committed to the whole Roman Catholic discipline as well as to its theory. It is bound to put down all adverse teachers, as usurping its function and hindering the reception of its unquestionable doctrine—is bound to use as much force as may be useful for doing this—is bound, therefore, to imprison, to fine, and, if necessary, to inflict severer penalties, so that error may be exterminated and truth be triumphant. If, rather than punish a few on Earth, it allows many to be eternally damned for misbelief, it is manifestly culpable. Evidently it must do all, or it must do nothing. If it does not claim infallibility, it cannot in reason set up a national religion; and if, by setting up a national religion, it does claim infallibility, it ought to coerce all men into the belief of that religion. Thus, as we said, every State-church is essentially popish.

## POOR-LAWS

THE notion popularized by Cobbett, that every one has a right to a maintenance out of the soil, leaves those who adopt it in an awkward predicament. Ask for some precise definition of the right—inquire “What is a maintenance?” They are dumb. “Is it,” say you, “potatoes and salt, with rags and a mud cabin? or is it bread and bacon, in a two-roomed cottage? Will a joint on Sundays suffice? or does the demand include meat and malt liquor daily? Will tea, coffee, and tobacco be expected? and if so, how many ounces of each? Are bare walls and brick floors

all that is needed? or must there be carpets and paper hangings? Are shoes considered essential? or will the Scotch practice be approved? Shall the clothing be of fustian? if not, of what quality must the broadcloth be? In short, just point out where, between the two extremes of starvation and luxury, this something called a maintenance lies. Again they are dumb. There is no possible reply for them. Opinions they may offer in plenty; but not a precise unanimous answer. One thinks that a bare subsistence is all that can fairly be demanded. Here is another who hints

it something beyond mere necessities. And some of the more consistent, pushing the doctrine to its legitimate result, will rest satisfied with nothing short of community of property. Who now shall decide among these conflicting notions?

The right to labour—that French translation of our poor-law doctrine—may be similarly treated. A criticism parallel to the foregoing would place its advocates in a parallel dilemma. But here is another way in which the fallacy of this theory, either in its English or its Continental form, may be made manifest.

When the artizan asserts his right to have work provided for him, he presupposes the existence of some power on which devolves the duty of providing such work. What power is this? The government, he says. But the government is not an original power, it is a deputed one, and can be held responsible for nothing save the performance of its employer's behests. Who is its employer? Society. Strictly speaking, therefore, the assertion of our artizan is, that it is the duty of society to find work for him. But he is himself a member of society, and has hence a share in the *duty* of finding work for every man. And hence, if we indicate his fellows alphabetically, his theory is that A, B, C, and the rest of the nation, are bound to find work for him; that he is bound, in company with B, C, and the rest, to find work for A; that he is bound, in company with A, C, and the rest, to find work for B; and so on with each individual of the many millions, of whom the society may be composed!

Most of the objections raised by the dissenter to an established religion tell with equal force against established charity. He asserts that it is unjust to tax him for the support of a creed he does not believe. May not another as reasonably protest against being taxed for the maintenance of a system of relief he disapproves? He denies the right of any bishop or council to choose for him which doctrine he shall accept and which

he shall reject. Why does he not also deny the right of any commissioner or vestry to choose for him who are worthy of his charity and who are not? If he dissents from a national church on the ground that religion will be more general and more sincere when voluntarily sustained, should he not similarly dissent from a poor-law on the ground that spontaneous beneficence will produce results both wider and better? Might not the corruption which he points out as neutralizing the effects of a State-taught creed, be paralleled by those evils of pauperism accompanying a State-provision for the poor? Whoso believes that spiritual destitution is to be remedied only by a national church, may with some show of reason propose to deal with physical destitution by an analogous instrumentality. But the advocate of voluntaryism is bound to stand by his principle in the one case as much as in the other.

Whether the sufferings of the unfortunate shall be soothed in obedience to the gentle whisperings of benevolence, or whether fear of the harsh threats of law shall be the motive for relieving them, is indeed a question of no small importance. In deciding how misery is best alleviated, we have to consider, not only what is done for the afflicted, but what is the reactive effect upon those who do it. The relationship that springs up between benefactor and beneficiary is, for this present state of the world, a refining one. The emotion accompanying every generous act adds an atom to the fabric of the ideal man. As no cruel thing can be done without character being thrust a degree back towards barbarism, so no kind thing can be done without character being moved a degree forward towards perfection. Doubly efficacious, therefore, are all assuagings of distress instigated by sympathy; for not only do they remedy the particular evils to be met, but they help to mould humanity into a form by which such evils will one day be precluded.

Far otherwise is it with law-enforced plans of relief. These exercise just the opposite influence. "The quality of mercy (or pity) is not strained," says the poet. But a poor-law tries to make men pitiful by force. "It droppeth as the gentle rain from heaven," continues the poet. By a poor law it is wrung from the unwilling. "It blesses him that gives, and him that takes," adds the poet. A poor-law makes it curse both; the one with discontent and recklessness, the other with complainings and often-renewed bitterness.

This turning of balm into poison must have been remarked by the most careless. Watch a ratepayer when the collector's name is announced. You shall observe no kindling of the eye at some thought of happiness to be conferred — no relaxing of the mouth as though selfish cares had for the moment been forgotten — no softening of the voice to tell of compassionate emotion: no, none of these; but rather will you see contracted features, a clouded brow, a sudden disappearance of what habitual kindness of expression there may be. The tax-paper is glanced over half in fear and half in vexation; there are grumblings about the short time that has elapsed since the last rate. The purse comes slowly from the pocket; and after the collector, who is treated with bare civility, has made his exit, some little time passes before the usual equanimity is regained. Is there anything in this to remind us of the virtue which is "twice blessed"? Note, again, how this act-of-parliament charity perpetually supersedes men's better sentiments. Here is a respectable citizen with enough and to spare: a man of some feeling; liberal, if there is need; generous even, if his pity is excited. A beggar knocks at his door; or he is accosted in his walk by some way-worn tramp. What does he do? Does he listen, investigate, and, if proper, assist? No; he commonly cuts short the tale with — "I have nothing for you, my good man; you must go to your parish." And then he shuts

the door, or walks on, as the case may be, with evident unconcern. Thus does the consciousness that there exists a legal provision for the indigent, act as an opiate to the yearnings of sympathy. Had there been no ready-made excuse, the behaviour would probably have been different. Commiseration, pleading for at least an inquiry into the case, would most likely have prevailed; and, in place of an application to the board of guardians, ending in a pittance coldly handed across the pay-table to be thankless received, might have commenced a relationship good for both parties — a generosity humanizing to the one, and a succour made doubly valuable to the other by a few words of consolation and encouragement, followed, it may be, by a lift into some self-supporting position.

In truth, there could hardly be found a more efficient device for decreasing fellow-feeling, than this system of State almsgiving. Being kind by proxy — could anything be more blighting to the finer instincts? Here is an institution through which, for a few shillings periodically paid, the citizen may compound for all kindness owing from him to his poorer brothers. Is he troubled with twinges of conscience? here is an anodyne for him, to be had by subscribing so much in the pound on his rental. Is he indifferent as to the welfare of others? why then in return for punctual payment of rates he shall have absolution for hardness of heart. Look: here is the advertisement. "Gentlemen's benevolence done for them, in the most business-like manner, and on the lowest terms. Charity doled out by a patent apparatus, warranted to save all soiling of fingers and offence to the nose. Good works undertaken by contract. Infallible remedies for self-reproach always on hand. Tender feelings kept easy at per annum."

Thus we have the gentle, softening elevating intercourse that should be habitually taking place between rich and poor, superseded by a cold, hard, lifeless mechanism, bound together by dry parch-

ment acts and regulations—managed by commissioners, boards, clerks, and collectors, who perform their respective functions as tasks—and kept going by money forcibly taken from all classes indiscriminately. In place of the music breathed by feelings attuned to kind deeds, we have the harsh creaking and jarring of a thing that cannot stir without creating discord—a thing whose every act, from the gathering of its funds to their final distribution, is prolific of grumblings, discontent, anger—a thing that breeds squabbles about authority, disputes as to claims, brawlings, jealousies, litigations, corruption, trickery, lying, ingratitude—a thing that supplants, and therefore makes dormant, men's nobler feelings, while it stimulates their baser ones.

And now mark how we find illustrated in detail the truth elsewhere expressed in the abstract, that whenever a government oversteps its duty—the maintaining of men's rights—it inevitably retards the process of adaptation. For what faculty is it whose work a poor-law so officiously undertakes? Sympathy. The very faculty above all others needing to be exercised. The faculty which distinguishes the social man from the savage. The faculty which originates the idea of justice and makes men regardful of one another's claims. Of this faculty poor laws partially supply the place. By doing which they diminish the demands made upon it, limit its exercise, check its development, and therefore retard the process of adaptation.

Pervading all Nature we may see at work a stern discipline which is a little cruel that it may be very kind. That state of universal warfare maintained throughout the lower creation, to the great perplexity of many worthy people, is at bottom the most merciful provision which the circumstances admit of. It is much better that the ruminant animal, when deprived by age of the vigour which made its existence a pleasure, should be killed by some beast of prey,

than that it should linger out a life made painful by infirmities, and eventually die of starvation. By the destruction of all such, not only is existence ended before it becomes burdensome, but room is made for a younger generation capable of the fullest enjoyment; and, moreover, out of the very act of substitution happiness is derived for a tribe of predatory creatures. Note, further, that their carnivorous enemies not only remove from herbivorous herds individuals past their prime, but also weed out the sickly, the malformed, and the least fleet or powerful. By the aid of which purifying process, as well as by the fighting so universal in the pairing season, all vitiation of the race through the multiplication of its inferior samples is prevented; and the maintenance of a constitution completely adapted to surrounding conditions, and therefore most productive of happiness, is ensured.

The development of the higher creation is a progress towards a form of being, capable of a happiness undiminished by these drawbacks. It is in the human race that the consummation is to be accomplished. Civilization is the last stage of its accomplishment. And the ideal man is the man in whom all the conditions to that accomplishment are fulfilled. Meanwhile, the well-being of existing humanity and the unfolding of it into this ultimate perfection, are both secured by that same beneficial though severe discipline, to which the animate creation at large is subject. It seems hard that an unskillfulness which with all his efforts he cannot overcome, should entail hunger upon the artizan. It seems hard that a labourer incapacitated by sickness from competing with his stronger fellows should have to bear the resulting privations. It seems hard that widows and orphans should be left to struggle for life or death. Nevertheless, when regarded not separately but in connexion with the interests of universal humanity, these harsh fatalities are seen to be full of beneficence—the same beneficence which brings to early graves the children

of diseased parents, and singles out the intemperate and the debilitated as the victims of an epidemic.

There are many very amiable people who have not the nerve to look this matter fairly in the face. Disabled as they are by their sympathies with present suffering, from duly regarding ultimate consequences, they pursue a course which is injudicious, and in the end even cruel. We do not consider it true kindness in a mother to gratify her child with sweet-meats that are likely to make it ill. We should think it a very foolish sort of benevolence which led a surgeon to let his patient's disease progress to a fatal issue, rather than inflict pain by an operation. Similarly, we must call those spurious philanthropists who, to prevent present misery, would entail greater misery on future generations. That rigorous necessity which, when allowed to operate, becomes so sharp a spur to the lazy and so strong a bridle to the random, these paupers' friends would repeal, because of the wailings it here and there produces. Blind to the fact that under the natural order of things society is constantly excreting its unhealthy, imbecile, slow, vacillating, faithless members, whose unthinking, though well-meaning, men advocate an interference which not only stops the purifying process, but even increases the vitiation—absolutely encourages the multiplication of the reckless and incompetent by offering them an unfailing provision, and discourages the multiplication of the competent and provident by heightening the difficulty of maintaining a family. And thus, in their eagerness to prevent the salutary sufferings that surround us, these sigh-wise and groan-foolish people bequeath to posterity a continually increasing curse.

Returning again to the highest point of view, we find that there is a second and still more injurious mode in which law-enforced charity checks the process of adaptation. To become fit for the social state, man has not only to lose his savagery but he has to acquire the

capacities needful for civilized life. Power of application must be developed; such modification of the intellect as shall qualify it for its new tasks must take place; and, above all, there must be gained the ability to sacrifice a small immediate gratification for a future great one. The state of transition will of course be an unhappy state. Misery inevitably results from incongruity between constitution and conditions. Humanity is being pressed against the inexorable necessities of its new position—is being moulded into harmony with them, and has to bear the resulting unhappiness as best it can. The process *must* be undergone and the sufferings *must* be endured. No power on Earth, no cunningly-devised laws of statesmen, no world-rectifying schemes of the humane, no communist panaceas, no reforms that men ever did broach or ever will broach, can diminish them one jot. Intensified they may be, and are; and in preventing their intensification the philanthropic will find ample scope for exertion. But there is bound up with the change a *normal* amount of suffering, which cannot be lessened without altering the very laws of life. Every attempt at mitigation of this eventuates in exacerbation of it. All that a poor-law or any kindred institution can do, is to partially suspend the transition—to take off for a time, from certain members of society, the painful pressure which is affecting their transformation. At best this is merely to postpone what must ultimately be borne. But it is more than this: it is to undo what has already been done. For the circumstances to which adaptation is taking place cannot be superseded without causing a retrogression; and as the whole process must some time or other be passed through, the lost ground must be gone over again, and the attendant pain borne afresh.

At first sight these considerations seem conclusive against *all* relief to the poor—voluntary as well as compulsory; and it is no doubt true that they imply a condemnation of whatever<sup>\*</sup> private charity

enables the recipients to elude the necessities of our social existence. With this condemnation, however, no rational man will quarrel. That careless squandering of pence which has fostered into perfection a system of organized begging—which has made skilful mendicancy more profitable than ordinary manual labour—which induces the simulation of diseases and deformities—which has called into existence warehouses for the sale and hire of impostors' dresses—which has given to pity-inspiring babes a market value of 9d. per day—the unthinking benevolence which has generated all this cannot but be disapproved by every one. Now it is only against this injudicious charity that the foregoing argument tells. To that charity which may be described as helping men to help themselves, it makes no objection—countenances it rather. And in helping men to help themselves, there remains abundant scope for the exercise of a people's sympathies. Accidents will still supply victims on whom generosity may be legitimately expended. Men thrown off the track by unforeseen events, men who have failed for want of knowledge inaccessible to them, men ruined by the dishonesty of others, and men in whom hope long delayed has made the heart sick, may, with advantage to all parties, be assisted. Even the prodigal, after severe hardship has branded his memory with the unbending conditions of social life to which he must submit, may properly have another trial afforded him. And, although by these ameliorations the process of adaptation must be remotely interfered with, yet, in the majority of cases, it will not be so much retarded in one direction as it will be advanced in another.

Objectionable as we find a poor-law to be, even under the supposition that it does what it is intended to do—diminish present suffering—how shall we regard it in finding that in reality it does no such thing?—cannot do any such thing? Yet, paradoxical as the assertion looks, this is absolutely the fact. Let but the observer

cease to contemplate so fixedly one side of the phenomenon—pauperism and its relief, and begin to examine the other side—rates and the *ultimate* contributors of them, and he will discover that to suppose the sum-total of distress diminishable by act-of-parliament bounty is a delusion.

Here, at any specified period, is a given quantity of food and things exchangeable for food, in the hands or at the command of the middle and upper classes. A certain portion of this food is needed by these classes themselves, and is consumed by them at the same rate, or very near it, be there scarcity or abundance. Whatever variation occurs in the sum-total of food and its equivalents, must therefore affect the remaining portion, not used by these classes for personal sustenance. This remaining portion is paid by them to the people in return for their labour, which is partly expended in the production of a further supply of necessaries, and partly in the production of luxuries. Hence, by how much this portion is deficient, by so much must the people come short. A redistribution by legislative or other agency cannot make that sufficient for them which was previously insufficient. It can do nothing but change the parties by whom the insufficiency is felt. If it gives enough to some who else would not have enough, it must inevitably reduce certain others to the condition of not having enough.

Should there be any to whom this abstract reasoning is unsatisfactory, a concrete statement of the case will, perhaps, remove their doubts. A poor-rate collector takes from the citizen a sum of money equivalent to bread and clothing for one or more paupers. Had not this sum been so taken, it would either have been used to purchase superfluities, which the citizen now does without, or it would have been paid by him into a bank, and lent by the banker to a manufacturer, merchant, or tradesman; that is, it would ultimately have been given in wages either to the producer of

the superfluities or to an operative paid out of the banker's loan. But this sum having been carried off as poors'-rate, whoever would have received it as wages must now to that extent go without wages. The food which it represented having been taken to sustain a pauper, the artizan to whom that food would have been given in return for work done, must now to that extent lack food. And thus, as at first said, the transaction is simply a change of the parties by whom the insufficiency of food is felt.

Nay, the case is even worse. Already it has been pointed out that, by suspending the process of adaptation, a poor-law increases the distress to be borne at some future day ; and here we shall find that it also increases the distress to be borne now. For be it remembered that of the sum taken in any year to support paupers, a large portion would otherwise have gone to support labourers employed

in new reproductive works—land-drainage, machine-building, &c. An additional stock of commodities would by-and-by have been produced, and the number of those who go short would consequently have been diminished. Thus the astonishment expressed by some that so much misery should exist, notwithstanding the distribution of fifteen millions a year by endowed charities, benevolent societies, and poor-law unions, is quite uncalled for, seeing that the larger the sum gratuitously administered, the more intense will shortly become the suffering. Manifestly, out of a given population, the greater the number living on the bounty of others, the smaller must be the number living by labour ; and the smaller the number living by labour, the smaller must be the production of food and other necessaries ; and the smaller the production of food and other necessaries, the greater must be the distress.

## NATIONAL EDUCATION

IN the same way that our definition of State-duty forbids the State to administer religion or charity, so likewise does it forbid the State to administer education. Inasmuch as the taking away, by Government, of more of a man's property than is needful for maintaining his rights, is an infringement of his rights, and therefore a reversal of the Government's function towards him ; and inasmuch as the taking away of his property to educate his own or other people's children is not needful for the maintaining of his rights ; the taking away of his property for such a purpose is wrong.

Should it be said that the rights of the children are involved, and that

State-interposition is required to maintain these, the reply is that no cause for such interposition can be shown until the children's rights have been violated, and that their rights are not violated by a neglect of their education. For, as repeatedly explained, what we call rights are merely arbitrary subdivisions of the general liberty to exercise the faculties ; and that only can be called an infringement of rights which actually diminishes this liberty—cuts off a previously existing power to pursue the objects of desire. Now the parent who is careless of a child's education does not do this. The liberty to exercise the faculties is left intact. Omitting instruction in no way

takes from a child's freedom to do whatsoever it wills in the best way it can ; and this freedom is all that equity demands. Every aggression, be it remembered—every infraction of rights, is necessarily *active* ; whilst every neglect, carelessness, omission, is as necessarily *passive*. Consequently, however wrong the non-performance of a parental duty may be, it does not amount to a breach of the law of equal freedom, and cannot therefore be taken cognizance of by the State.

Were there no direct disproof of the frequently-alleged right to education at the hands of the State, the absurdities in which it entangles its assertors would sufficiently show its invalidity. Conceding for a moment that the Government is bound to educate a man's children, then, what kind of logic will demonstrate that it is not bound to feed and clothe them ? If there should be an act-of-parliament provision for the development of their minds, why should there not be an act-of-parliament provision for the development of their bodies ? The reasoning which is held to establish the right to intellectual food will equally well establish the right to material food : nay, will do more—will prove that children should be altogether cared for by Government. For if the benefit, importance, or necessity, of education, be assigned as a sufficient reason why Government should educate, then may the benefit, importance, or necessity, of food, clothing, shelter, and warmth be assigned as a sufficient reason why Government should administer these also. So that the alleged right cannot be established without annulling all parental responsibility whatever.

Should further refutation be needful, there is the ordeal of a definition. We lately found this ordeal fatal to the assumed right to a maintenance ; we shall find it equally fatal to this assumed right to an education. For what is an education ? Where, between the teaching of a dame-school and the most comprehensive university *curriculum*, can

be drawn the line separating that portion of mental culture which may be justly claimed of the State, from that which may not be so claimed ? What peculiar quality is there in reading, writing, and arithmetic which gives the embryo citizen the right to have them imparted to him, but which quality is not shared in by geography, and history, and drawing, and the natural sciences ? Must calculation be taught because it is useful ? why so is geometry, as the carpenter and mason will tell us ; so is chemistry, as we may gather from dyers and bleachers. Where is the unit of measure by which we may determine the respective values of different kinds of knowledge ? Or, assuming them determined, how can it be shown that a child may claim from the civil power knowledge of such and such values, but not knowledge of certain less values ?

A sad snare would these advocates of legislative teaching betray themselves into, could they substantiate their doctrine. For what is meant by saying that a Government ought to educate the people ? Why should they be educated ? What is the education for ? Clearly to fit the people for social life—to make them good citizens. And who is to say what are good citizens ? The Government : there is no other judge. And who is to say how these good citizens may be made ? The Government : there is no other judge. Hence the proposition is convertible into this—a Government ought to mould children into good citizens, using its own discretion in settling what a good citizen is, and how the child may be moulded into one. It must first form for itself a definite conception of a pattern citizen ; and having done this, must elaborate a system of discipline which seems best calculated to produce citizens after that pattern. This system of discipline it is bound to enforce to the uttermost. For if it does otherwise, it allows men to become different from what in its judgment they should become, and therefore

fails in that duty it is charged to fulfil. Being thus justified in carrying out rigidly such plans as it thinks best, every Government ought to do what the despotic Governments of the Continent and of China do. That regulation under which, in France, "private schools cannot be established without a licence from the minister, and can be shut up by a simple ministerial order," is a step in the right direction, but does not go far enough; seeing that the State cannot permit its mission to be undertaken by others, without endangering the due performance of it. The forbidding of all private schools whatever, as until recently in Prussia, is nearer the mark. Austrian legislation, too, realizes with some consistency the State-education theory. By it a tolerably stringent control over the mental culture of the nation is exercised. Much thinking being held at variance with good citizenship, the teaching of metaphysics, political economy, and the like, is discouraged. Some scientific works are prohibited. And a reward is offered for the apprehension of those who circulate bibles—the authorities in the discharge of their function preferring to entrust the interpretation of that book to their employés the Jesuits. But in China alone is the idea carried out with logical completeness. There the Government publishes a list of works which may be read; and, considering obedience the supreme virtue, authorizes such only as are friendly to despotism. Fearing the unsettling effects of innovation, it allows nothing to be taught but what proceeds from itself. To the end of producing pattern-citizens it exerts a stringent discipline over all conduct. There are "rules for sitting, standing, walking, talking, and bowing, laid down with the greatest precision. Scholars are prohibited from chess, football, flying kites, shuttlecock, playing on wind instruments, training beasts, birds, fishes, or insects—all which amusements, it is said, dissipate the mind and debase the heart."

Now a minute dictation like this,

which extends to every action and will brook no nay, is the legitimate realization of this State-education theory. Whether the Government has erroneous conceptions of what citizens ought to be, or whether the methods of training it adopts are injudicious, is not the question. According to the hypothesis it is commissioned to discharge a specified function. It finds no ready-prescribed way of doing this. It has no alternative, therefore, but to choose that way which seems to it most fit. And as there exists no higher authority, either to dispute or confirm its judgment, it is justified in the absolute enforcement of its plans, be they what they may. As from the proposition that Government ought to teach religion, there springs the other proposition, that Government must decide what is religious truth, and how it is to be taught; so, the assertion that Government ought to educate, necessitates the further assertion that it must say what education is, and how it shall be conducted. And the same rigid popery which we found to be a logical consequence in the one case, follows in the other also.

There are few sayings more trite than this, that love of offspring is one of our most powerful passions. To become a parent is an almost universal wish. The intensity of affection exhibited in the glistening eye, the warm kiss, and the fondling caress—in the untiring patience, and the ever ready alarm of the mother, is a theme on which philosophers have written and poets have sung in all ages. Every one has remarked how commonly the feeling overmasters all others. Observe the self-gratulation with which maternity witnesses her first-born's unparalleled achievements. Mark the pride with which the performances of each little brat are exhibited to every visitor as indicating a precocious genius. Consider again the deep interest which in later days a father feels in his children's mental welfare, and the anxiety he manifests to get them on

in life: the promptings of his natural affection being oftentimes sharpened by the reflection that the comfort of his old age may, perchance, be dependent upon their success.

Now "servants and interpreters of nature" have usually supposed these feelings to be of some use. Hitherto they have thought that the gratification a mother feels from the forwardness of her little ones serves as an educational stimulus—that the honour which the father expects to derive from the distinction of his sons acts as an incentive to their improvement—and that the anticipation by parents of the distress which ill-trained children may one day entail constitutes an additional spur to the proper management of them. It would appear, however, according to the State-educationists, that they have been mistaken. It seems that this apparatus of feelings is insufficient to do the needful work. And so, in default of any natural provision for supplying the exigency, legislators exhibit to us the design and specification of a State-machine, made up of masters, ushers, inspectors, and councils, to be worked by a due proportion of taxes, and to be plentifully supplied with raw material, in the shape of little boys and girls, out of which it is to grind a population of well-trained men and women.

But it is argued that parents, and especially those whose children most need instructing, do not know what good instruction is. "In the matter of education," says Mr. Mill, "the intervention of Government is justifiable; because the case is one in which the interest and judgment of the consumer are not sufficient security for the goodness of the commodity."

It is strange that so judicious a writer should feel satisfied with such a worn-out excuse. This alleged incompetency on the part of the people has been the reason assigned for all State-interferences whatever. It was on the plea that buyers were unable to tell good fabrics from bad, that those complicated regulations which

encumbered the French manufacturers were established. The use of certain dyes here in England was prohibited, because of the insufficient discernment of the people. Directions for the proper making of pins were issued, under the idea that experience would not teach the purchasers which were best. Those examinations as to competency which the German handcraftsmen undergo, are held needful as safeguards to the consumers. There is hardly a single department of life over which, for many reasons, legislative supervision has not been, or may not be, established. Here is Mr. H. Hodson Rugg, M.R.C.S., publishing a pamphlet to point out the injury inflicted upon poor ignorant householders by the adulteration of milk, and proposing as a remedy that there shall be Government officers to test the milk, and to confiscate it when not good—police to inspect the ventilation of cow-sheds and to order away invalid cattle—and a Government cow-infirmary, with veterinary surgeon attached. To-morrow some one else may start up to tell us that bad bread is still more injurious than bad milk, equally common, quite as difficult to distinguish, and that, consequently, bakehouses ought to be overlooked by the authorities. Next there will be wanted officials with hydrometers and chemical re-agents, to dabble in the vats of the porter-breweries. In the wake of these must, of course, follow others, commissioned to watch the doings of wine merchants. And so on until, in the desire to have all processes of production duly inspected, we approach a condition somewhat like that of the slave States, in which, as they say, "one-half of the community is occupied in seeing that the other half does its duty." And for each additional interference the plea may be, as it always has been, that "the interest and judgment of the consumer are not sufficient security for the goodness of the commodity."

Should it be said that the propriety of legislative control depends upon circumstances; that respecting some articles the judgment of the consumer is sufficient,

while respecting other articles it is not ; and that the difficulty of deciding upon its quality, places education among these last ; the reply again is, that the same has been said on behalf of all meddlings in turn. Plenty of trickeries, plenty of difficulties in the detection of fraud, plenty of instances showing the inability of purchasers to protect themselves, are cited by the advocates of each proposed recourse to official regulation ; and in each case it is urged that here, at any rate, official regulation is required. Yet does experience disprove these inferences one after another, teaching us that, in the long run, the interest of the consumer is not only an efficient guarantee for the goodness of the things consumed, but the best guarantee. Is it not unwise, then, to trust for the hundredth time in one of these plausible but deceptive conclusions ? Is it not wise, rather, to infer that however much appearances are to the contrary, the choice of the commodity education, like the choice of all other commodities, may be safely left to the discretion of buyers ?

Still more reasonable will this inference appear on observing that the people are not, after all, such incompetent judges of education as they seem. Ignorant parents are generally quick enough to discern the effects of good or bad teaching : will note them in the children of others, and act accordingly. Moreover it is easy for them to follow the example of the better instructed, and choose the same schools. Or they may get over the difficulty by asking advice ; and there is generally some one both able and willing to give the uneducated parent a trustworthy answer to his inquiry about teachers. Lastly, there is the test of price. With education, as with other things, price is a tolerably safe index of value ; it is one open to all classes ; and it is one which the poor instinctively appeal to in the matter of schools ; for it is notorious that they look coldly at very cheap or gratuitous instruction.

But even admitting that while this defect of judgment is not virtually so great

as is alleged, it nevertheless exists, the need for interference is still denied. The civil is undergoing rectification, as all analogous ones are or have been. The rising generation will better understand what good education is than their parents do, and their descendants will have clearer conceptions of it still. Whoso thinks the slowness of the process a sufficient reason for meddling, must, to be consistent, meddle in all other things ; for the ignorance which in every case serves as an excuse for State-interposition is of very gradual cure. The errors both of consumers and producers often take generations to set right. Improvements in the carrying on of commerce, in manufactures, and especially in agriculture, spread almost imperceptibly. Take rotation of crops for an example. And if this tardiness is a valid argument for interference in one case, why not in others ? Why not have farms superintended by Government, because it may take a century for farmers generally to adopt the plans suggested by modern science ?

When, in the matter of education, "the interest and judgment of the consumer" are said not to be "sufficient security for the goodness of the commodity" ; and when it is argued that Government superintendence is therefore needful ; a very questionable assumption is made : the assumption, namely, that "the interest and judgment" of a Government are sufficient security. Now there is good reason to dispute this ; nay, even to assert that, taking the future into account, they offer much less security.

The problem is how best to develop minds : a problem among the most difficult—may we not say, *the* most difficult ? Two things are needful for its solution. First, to know what minds should be fashioned into. Next, to know how they may be so fashioned. From the work to be done, turn we now to the proposed doers of it. Men of education (as the word goes) they no

doubt are ; well-meaning, many of them ; thoughtful, some ; philosophical, a few : men, however, for the most part, born with silver spoons in their mouths, and prone to regard human affairs as reflected in these—somewhat distortedly. Very comfortable lives are led by the majority of them, and hence “things as they are” find favour in their eyes. For their tastes—they are shown in the subordination of national business to the shooting of grouse and the chasing of foxes. For their pride it is in wide estates or long pedigrees ; and should the family coat of arms bear some such ancient motto as “Strike hard,” or, “Furth fortune, and fill the fetters,” it is a great happiness. As to their ideal of society—it is either a sentimental feudalism ; or it is a state under which the people shall behave “lowly and reverently to all their betters” and “do their duty in that state of life unto which it shall please God to call them” ; or it is a state arranged with the view of making each labourer the most efficient producing tool, to the end that the accumulation of wealth may be the greatest possible. Add to this, that their notions of moral discipline are shown in the sending of their sons to schools where flogging and flogging are practised, and where they themselves were brought up. Now can the “judgment” of such respecting the commodity education, be safely relied on? Certainly not.

Thus, even were it true that in the matter of education “the interest and judgment of the consumer are not sufficient security for the goodness of the commodity,” the wisdom of superseding them by the “interest and judgment” of a Government is by no means obvious. It may, indeed, be said that the argument proves only the unfitness of existing Governments to become national teachers, and not the unfitness of a Government normally constituted ; whereas the object of inquiry being to determine what a Government *should* do, the hypothesis must be that the Government is what it *should* be. To this the

reply is, that the nature of the allegation to be met necessitates a descent to the level of present circumstances. It is on the defective “interest and judgment” of the people, *as they now are*, that the plea for legislative superintendence is based ; and, consequently, in criticizing this plea we must take Government *as it now is*. We cannot reason as though Government were what it should be ; since, before it can become such, any alleged deficiency of “interest and judgment” on the part of the people must have disappeared.

The impolicy of setting up a national organization for cultivating the popular mind, and commissioning the Government to superintend this organization, is further seen in the general truth that every such organization is in spirit conservative, and not progressive. All institutions have an instinct of self-preservation growing out of the selfishness of those connected with them. Their roots are in the past and the present ; never in the future. Change threatens them, modifies them, eventually destroys them. Hence to change they are uniformly opposed. On the other hand, education, properly so called, is closely associated with change—is always fitting men for higher things, and *un*fitting them for things as they are. Therefore, between institutions whose existence depends upon man continuing what he is, and true education, which is one of the instruments for making him something other than he is, there must always be enmity.

From the time of the Egyptian priesthood downwards, the conduct of corporations, whether political, ecclesiastical, or educational, has given proof of this. Some 300 years B.C., unlicensed schools were forbidden by the Athenian senate. In Rome, the liberty of teaching was attacked twice before the Christian era ; and again, afterwards, by the Emperor Julian. The existing Continental Governments show, by their analogous policy, how persistent the

tendency is. In the universality of censorships we see the same fact further illustrated. The celebrated saying of the Empress Catharine to her prime minister, well exhibits the way in which rulers regard the spread of knowledge. And whenever Governments have undertaken to educate, it has been with the view of forestalling that spontaneous education which threatened their own supremacy. Witness the case of China, where diligently-impressed ideas, such as—"O! how magnificent are the affairs of Government!" "O! what respect is due to the officers of Government!" sufficiently indicate the intention. Witness, again, the case of Austria, where, in accordance with the will of the Emperor Francis, the training of the popular mind was entrusted to the Jesuits, that they might "counteract the propagandism of liberty, by the propagandism of superstition" Nor have there been wanting signs of a like spirit here in England. The attempt in Cobbett's day to put down cheap literature, by an Act which prevented weekly publications from being sold for less than sixpence, unmitigably indicated it. It was again exhibited in the reluctance with which the newspaper stamp-duty was reduced, when resistance had become useless. And we may still see it in the double-facedness of a legislature which professes to favour popular enlightenment, and yet continues to raise a million and a quarter sterling yearly from "taxes on knowledge."

How unfriendly all ecclesiastical bodies have been to the spread of education every one knows. The obstinacy shown by the Brahmin in fighting against the truths of modern science—the fanaticism with which the Mahometan doctor ignores all books but the Koran—the prejudice fostered by the religious institutions of our own country against the very name of philosophy; are kindred illustrations of the conduct which this self-conserving instinct produces. In that saying of the monks—"We must put down printing

or printing will put down us," the universal motive was plainly expressed; as it was, again, through the mouth of that French bishop who denounced the Bell and Lancaster systems as inventions of the devil. Nor let any one conclude that the educational zeal latterly manifested by Church-clergy indicates a new animus. Those who remember the bitterness with which Sunday schools were at first assailed by them, and those who mark how keenly they now compete with Dissenters for the children of the poor, can see clearly enough that they are endeavouring to make the best of a necessity—that, having a more or less defined consciousness that educational progress is inevitable, they wish to educate the people in allegiance to the Church.

Still more manifest becomes this obstructive tendency on considering that the very organizations devised for the spreading of knowledge, may themselves act as suppressors of it. Thus it is said that Oxford was one of the last places in which the Newtonian philosophy was acknowledged. We read again, in the life of Locke, that "there was a meeting of the heads of houses at Oxford, where it was proposed to censure and discourage the reading of this essay (On the Human Understanding); and, after various debates, it was concluded that without any public censure each head of a house shall endeavour to prevent its being read in his own college." At Eton, too, in Shelley's time, "Chemistry was a forbidden thing," even to the banishment of chemical treatises. So uniformly has it been the habit of these endowed institutions to close the door against innovations, that they are among the last places to which any one looks for improvements in the art of teaching, or a better choice of subjects to be taught. The attitude of the universities towards concrete science has been that of contemptuous non-recognition. College authorities have long resisted, either actively or passively, the making of physiology,

chemistry, geology, &c., subjects of examination; and only of late, under pressure from without, and under the fear of being supplanted by rival institutions, have new studies been reluctantly taken to in small measure.

Now although *inertia* may be very useful in its place—although the resistance of office-holders has its function—although we must not quarrel with this instinct of self-preservation which gives to institutions their vitality, because it also upholds them through a lingering decrepitude, we may yet wisely refuse to increase its natural effect. It is necessary to have in our social economy a conservative force as well as a reforming one, that there may be progress for the *resultant*; but it is impolitic to afford the one an artificial advantage over the other. To establish a State-education is to do this, however. The teaching organization itself, and the Government which directs it, will inevitably lean to things as they are; and to give them control over the national mind is to give them the means of repressing aspirations after things as they should be.

Did the reader ever watch a boy in the first heat of a gardening fit? The sight is amusing, and not uninstructive. Probably a slice of a border—some couple of square yards or so—has been made over to him for his exclusive use. No small accession of dignity, and not a little pride of proprietorship, does he exhibit. So long as the enthusiasm lasts he never tires of contemplating his territory; and every companion, and every visitor with whom the liberty can be taken, is pretty sure to be met with the request—"Come and see my garden." Note chiefly, however, with what anxiety the growth of a few scrubby plants is regarded. Three or four times a day will the little urchin rush out to look at them. How pro-vokingly slow their progress seems to him! Each morning on getting up he hopes to find some marked change, and lo, everything appears just as it did the

day before. When *will* the blossoms come out? For nearly a week has some forward bud been promising him the triumph of a first flower, and still it remains closed. Surely there must be something wrong! Perhaps the leaves have stuck fast. Ah! that is the reason no doubt. And so ten to one you will some day catch our young florist busily engaged in pulling open the calyx, and, it may be, trying to unfold a few of the petals.

Somewhat like this childish impatience is the feeling exhibited by not a few State-educationists. Both they and their type show a lack of faith in natural forces—almost an ignorance that there are such forces. In both there is the same dissatisfaction with the normal rate of progress. And by both, artificial means are used to remedy what are conceived to be Nature's failures. Within these few years men have been awakened to the importance of instructing the people. That to which they were awhile since indifferent, or even hostile, has suddenly become an object of enthusiasm. With all the ardour of recent converts—with all a novice's inordinate expectations—with all the eagerness of a lately-aroused desire—do they await the hoped-for result; and are dissatisfied because the progress from general ignorance to universal culture has not been achieved in a generation. One would have thought it sufficiently clear to everybody that the great changes taking place in this world of ours are uniformly slow. Continents are upheaved at the rate of a foot or two in a century. The deposition of a delta is the work of tens of thousands of years. The transformation of barren rock into life-supporting soil takes countless ages. If any think society advances under a different law, let them read. Did it not require the whole Christian era to abolish slavery and serfdom in Europe? Did not a hundred generations live and die while picture-writing grew into printing? Have not science and commerce and mechanical skill increased at a similarly tardy

pace? Yet are men disappointed that a pitiful fifty years has not sufficed for popular enlightenment! Although within this period an advance has been made far beyond what the calm thinker would have expected—far beyond what the past rate of progress in human affairs seemed to prophesy; yet do these impatient people condemn the voluntary system as a failure! A natural process—a process of self-unfolding which the national mind had commenced—is pooh-poohed because it has not wrought a transformation in the course of what constitutes but a day in the life of humanity! And then, to make up for Nature's incompetence, the unfolding must be hastened by legislative fingerings!

There is, indeed, one excuse for attempts to spread education by artificial means, namely, the anxiety to diminish crime, of which education is supposed to be a preventive. "We hold," says Mr. Macaulay, "that whoever has the right to hang has the right to educate."<sup>1</sup> And in a letter relative to the Manchester district-system, Miss Martineau writes—"Nor can I see that political economy objects to the general rating for educational purposes. As a mere police-tax this rating would be a very cheap affair. It would cost us much less than we now pay for juvenile depravity."

Now the truth of these assumptions may be disputed. We have no evidence that education, as commonly understood, is a preventive of crime. Those perpetually re-iterated newspaper paragraphs, in which the ratios of instructed to uninstructed convicts are so triumphantly stated, prove just nothing. Before any inference can be drawn, it must be shown that these instructed and uninstructed convicts, come from two *equal* sections of society, alike *in all other respects* but that of knowledge—similar in rank and occupation, having similar advantages, labouring under similar temptations. But this is not only not

the truth; it is nothing like the truth. The many ignorant criminals belong to a most unfavourably circumstanced class; while the few educated ones are from a class comparatively favoured. As things stand it would be equally logical to infer that crime arises from living in badly-ventilated rooms, or from wearing dirty shirts; for were the inmates of a gaol to be catechised, it would be found that the majority of them had been placed in these conditions. Ignorance and crime are not cause and effect; they are concomitant results of the same cause. To be wholly untaught is to have moved among those whose incentives to wrong-doing are strongest; to be partially taught is to have been one of a class subject to less urgent temptations; to be well taught is to have lived almost beyond the reach of the usual motives for transgression. Ignorance, therefore (at least in the statistics referred to), simply indicates the presence of crime-producing influences, and can no more be called the cause of crime than the falling of a barometer can be called the cause of rain.

So far, indeed, from proving that morality is increased by education, the facts prove, if anything, the reverse. Thus we are told, in a report by the Rev. Joseph Kingsmill, head chaplain of Pentonville Prison, that the proportion borne by the educated to the uneducated convicts is fully as high as that which exists between the educated and the uneducated classes in the general population; although, as just explained, we might reasonably expect that, having had fewer temptations, the educated convicts would bear a smaller ratio to their class. Again, it has been shown from Government returns—"That the number of juvenile offenders in the Metropolis has been steadily increasing every year since the institution of the Ragged School Union; and that whereas the number of criminals who *cannot* read and write has *decreased* from 24,856 (in 1844) to 22,968 (in 1848)—or no less than 1,888 in that period—the number

<sup>1</sup> Quoted from a speech at Edinburgh.

of those who *can* read and write imperfectly has *increased* from 33,337 to 36,229—or 2,892—in the same time.”—*Morning Chronicle*, April 25, 1850. Another contributor to the series of articles on “Labour and the Poor,” from which the above statement is quoted, remarks that “the mining population (in the North) are exceedingly low in point of education and intelligence; and yet they contradict the theories generally entertained upon the connexion of ignorance with crime by presenting the least criminal section of the population of England.”—*Morning Chronicle*, Dec. 27, 1849. And, speaking of the women employed in the ironworks and collieries throughout South Wales, he says—“their ignorance is absolutely awful; yet the returns show in them a singular immunity from crime.”—*Morning Chronicle*, March 21, 1850.

If these testimonies are thought insufficient, they may be enforced by that of Mr. Fletcher, who has entered more elaborately into this question than perhaps any other writer of the day. Summing up the results of his investigations, he says:—

“1. In comparing the gross commitments for criminal offences with the proportion of instruction in each district, there is found to be a small balance *in favour* of the most instructed districts in the years of most industrial depression (1842-3-4), but a greater one *against* them *in* the years of less industrial depression (1845-6-7); while in comparing the more with the less instructed portions of each district, the final result is against the former at both periods, though fourfold at the latter what it is at the former.

“2. No correction for the ages of the population in different districts, to meet the excess of criminals at certain younger periods of life, will change the character of this superficial evidence against instruction; every legitimate allowance of the kind having already been made in arriving at these results.

“3. Down to this period, therefore,

the comparison of the criminal and educational returns of this, any more than of any other country of Europe, has afforded no sound statistical evidence in favour, and as little against, the moral effects associated with instruction, as actually disseminated among the people.”<sup>1</sup>

The fact is, that scarcely any connexion exists between morality and the discipline of ordinary teaching. Mere culture of the intellect (and education as usually conducted amounts to little more) is hardly at all operative upon conduct. Creeds pasted upon the mind, good principles learnt by rote, lessons in right and wrong, will not eradicate vicious propensities; though people, in spite of their experience as parents and citizens, persist in hoping they will. Intellect is not a power, but an instrument—not a thing which itself moves and works, but a thing which is moved and worked by forces behind it. To say that men are ruled by reason is as irrational as to say that men are ruled by their eyes. Reason is an eye—the eye through which the desires see their way to gratification. And educating it only makes it a better eye—gives it a vision more accurate and more comprehensive—does not at all alter the desires subserved by it. However far-seeing you make it, the passions will still determine the directions in which it shall be turned—the objects on which it shall dwell. Just those ends which the instincts or sentiments propose, will the intellect be employed to accomplish: culture of it having done nothing but increase the ability to accomplish them. Probably some will urge that enlightening men enables them to discern the penalties which naturally attach to wrong-doing; and in a certain sense this is true. But it is only superficially true. Though they may learn that the grosser crimes commonly bring retribution in one shape or other, they will not learn that the subtler ones do. Their

<sup>1</sup> *Summary of the Moral Statistics of England and Wales, 1849.* By Joseph Fletcher, Esq., Barrister-at-Law, one of Her Majesty's Inspectors of Schools.

sins will merely be made more Machiavellian. If, as Coleridge says, "a knave is a fool with a circumbendibus," then, by instructing the knave, you do but make the circumbendibus a wider one. Did much knowledge and piercing intelligence suffice to make men good, then Bacon should have been honest, and Napoleon should have been just. Where the character is defective, intellect, no matter how high, fails to regulate rightly, because predominant desires falsify its estimates. Nay, even a distinct foresight of evil consequences will not restrain when strong passions are at work. How else does it happen that men will get drunk, though they *know* drunkenness will entail on them suffering and disgrace, and (as with the poor) even starvation? How else is it that medical students, who *know* the diseases brought on by dissolute living better than other young men, are just as reckless, and even more reckless? How else is it that the London thief, who has been at the treadmill a dozen times, will steal again as soon as he is at liberty?

It is, indeed, strange that with the facts of daily life before them in the street, in the counting-house, and in the family, thinking men should still expect education to cure crime. If armies of teachers, regarded with a certain superstitious reverence, have been unable to purify society in all these eighteen centuries, it is hardly likely that other armies of teachers, not so regarded, will be able to do it. If natural persuasion, backed by supernatural authority, will not induce men to do as they would be done by, it is hardly likely that natural persuasion alone will induce them. If hopes of eternal happiness and terrors of eternal damnation fail to make human beings virtuous, it is hardly likely that the commendations and reproofs of the schoolmaster will succeed.

There is, in fact, a quite sufficient reason for failure—no less a reason than the impossibility of the task. The expectation that crime may presently be cured, whether by State-education, or

the silent system, or the separate system, or any other system, is one of those Utopianisms fallen into by people who pride themselves on being practical. Crime is incurable, save by that gradual process of adaptation to the social state which humanity is undergoing. Crime is the continual breaking out of the old unadapted nature—the index of a character unsuited to its conditions; and only as fast as the unfitness diminishes can crime diminish. Reforming men's conduct without reforming their natures is impossible; and to expect that their natures may be reformed, otherwise than by the forces which are slowly civilizing us, is visionary. Schemes of discipline or culture are of use only in proportion as they organically alter the national character, and the extent to which they do this is by no means great. It is not by humanly-devised agencies, good as these may be in their way, but it is by the never-ceasing action of circumstances upon men—by the constant pressure of their new conditions upon them—that the required change is mainly effected.

Meanwhile it may be remarked, that whatever moral benefit can be effected by education, must be effected by an education which is emotional rather than intellectual. If, in place of making a child *understand* that this thing is right and the other wrong, you make it *feel* that they are so—if you make virtue *loved* and vice *loathed*—if you arouse a noble *desire*, and make torpid an inferior one—if you bring into life a previously dormant *sentiment*—if you cause a sympathetic *impulse* to get the better of one that is selfish—if, in short, you produce a state of mind to which proper behaviour is *natural, spontaneous, instinctive*—you do some good. But no drilling in catechisms, no teaching of moral codes can effect this. Only by repeatedly awakening the appropriate *emotions* can character be changed. Mere ideas received by the intellect, meeting no response from within, are quite inoperative upon conduct, and are quickly forgotten after entering into life.

Perhaps it will be said that a discipline like this now described as the only efficient one, might be undertaken by the State. No doubt it might. But from all legislative attempts at emotional education may Heaven defend us!

Yet another objection remains. If, before agitating the matter, men had taken the precaution to define education, they would probably have seen that the State can afford no true help in the matter.

Of all qualities which is the one men most need? What is the quality in which the improvident masses are so deficient? Self-restraint—the ability to sacrifice a small present gratification for a prospective great one. A labourer endowed with due self-restraint would never spend his Saturday-night's wages at the public-house. Had he enough self-restraint, the artizan would not live up to his income during prosperous times and leave the future unprovided for. More self-restraint would prevent improvident marriages and the growth of a pauper population. And were there no drunkenness, no extravagance, no reckless multiplication, social miseries would be trivial.

How is the power of self-restraint to be increased? By a sharp experience alone can anything be done. Those in whom this faculty needs drawing out—*educating*—must be left to the discipline of Nature, and allowed to bear the pains attendant on their defect of character. The only cure for imprudence is the suffering which imprudence entails. Nothing but bringing him face to face with stern necessity, and letting him feel how unbending, how unpitying, it is, can improve the man of ill-governed desires. All interposing between humanity and the conditions of its existence—cushioning-off consequences by poor-laws or the like—serves but to neutralize the remedy and prolong the evil. Let us never forget that the law is—adaptation to circumstances, be they what they may. And if, rather than allow men to come in contact with the real circumstances of

their position, we place them in factitious circumstances, they will adapt themselves to these instead; and will, in the end, have to undergo the miseries of a re-adaptation to the real ones.

Now of all incentives to self-restraint, perhaps none is so strong as the sense of parental responsibility. And if so, to diminish that sense is to use the most effectual means of preventing self-restraint from being developed. We have ample proof of this in the encouragement of improvident marriages by a poor-law; and the effect which a poor-law produces, by relieving men from the responsibility of maintaining their children, must be produced in a smaller degree by taking away the responsibility of educating their children. The more the State undertakes to do for his family, the more are the expenses of the married man reduced, at the cost of the unmarried man, and the greater becomes the temptation to marry. Let not any think that the offer of apparently gratuitous instruction for his offspring would be of no weight with the working man deliberating on the propriety of taking a wife. Whoever has watched the freaks which strong passion plays in the councils of the intellect—has marked how it will bully into silence the weaker feelings that oppose it—how it will treat slightly the most conclusive adverse evidence, while, in urging the goodness of its own cause, “trifles light as air are confirmations strong”—whoever has marked this, cannot doubt that, in the deliberations of such an one, the prospect of free training for children would in no small degree affect the decision. Nay, indeed, it would afford a positive reason for giving way to his desires. Just as a man at an expensive dinner will eat more than he knows is good for him, on the principle of having his money's worth, so would the artizan find one excuse for marrying in the fact that, unless he did so, he would be paying education-rates for nothing.

Nor is it only thus that a State-education would encourage men to obey

present impulses. An influence unfavourable to the increase of self-control would be exercised by it throughout the whole of parental life. That restraint which the desire to give children school-ing now imposes on the improvident tendencies of the poor, would be removed. Many a man who, as things are, can but just keep the mastery over some vicious or extravagant propensity, and whose most efficient curb is the thought that if he gives way it must be at the sacrifice of that book learning which he is anxious to give his family, would fall were this curb weakened—would not only cease to improve in power of self-control as he is now doing, but would retrograde, and bequeath his offspring to a lower instead of a higher state of life.

Hence, a Government can educate in one direction only by *un*educating in another—can confer knowledge only at the expense of character. It retards the development of an all-important quality, universally needed, that it may give a smattering of information.

What a contrast is there between these futile contrivances of men and the silent-working agencies of Nature! With a perfect economy, Nature turns all forces to account. She makes action and re-action alike useful. This strong affection for progeny becomes in her hands the agent of a double culture, serving at once to fashion parent and child into the needful form. Yet this powerful instrumentality statesmen propose to dislocate: confidently opining that their own patent apparatus will answer a great deal better!

[NOTE.—Shortly after the publication of *Social Statics* Mr. Samuel Morley, the well-known philanthropist, requested me to let him reprint the foregoing chapter in the form of a pamphlet for distribution. I willingly assented. When, after a short time, a second edition of the pamphlet was called for, I took the opportunity of adding some further arguments, which I here append.]

The majority of those who vehemently

object to a State-religion are disabled from seeing that their favourite measure, State-education, is objectionable on similar grounds.

To the argument that, as all truths, whether religious or secular, form parts of one consistent whole, it seems strange that the State should be held incompetent to communicate certain of them, but competent to communicate others, the reply is that, concerning the one order of truths there is extensive disagreement, whereas concerning the other there is universal agreement. It is urged that while men are at issue upon every point of religious doctrine, they are unanimous upon the alphabet, upon spelling, upon the rules of arithmetic, upon grammar, upon geography, and so forth; and it is argued that, as the injustice attendant on State-preaching consists in the fact that all men do not subscribe to the creed preached, it follows that, as there is no difference of opinion respecting secular knowledge, there is no injustice in the State-propagation of it, and that, therefore, the analogy does not hold.

The position is doubtless a plausible one. It must be conceded, that the distinction drawn between the *beliefs* dealt out from the pulpit, and the *truths* communicated over the schoolmaster's desk, is in the main valid. But this admission by no means implies an abandonment of the point contended for. Perhaps a parallel will best indicate the right point of view.

"You see these stones, this wood, these slates, and this lime?" "Yes." "You admit that these are the materials of which houses are to be made?" "I do." "Then, of course, there can be no disagreement between us on the subject of building?" "I beg your pardon; we may disagree as to the size of the house, as to its plan, as to the proportions in which the materials shall be used, as to the dressing of them, as to the process of building, and as to endless matters of detail."

Such, by analogy, is the argument of the State-educationists; and such is the

reply to which they are open. Pointing to a heap of school books, they ask whether you admit the facts contained in them. They follow up your assent with the further question, whether these are not the facts out of which knowledge is to be organized. And, on your affirmative answer, they straightway base the conclusion that education is a subject respecting which there can be no dissent! They forget that to agree about the raw materials involves no agreement as to the manipulation of them.

That anything like an agreement as to the right way of conducting education is possible in our existing state, few, if any, will pretend. On the choice of subjects to be taught, on the order in which they should be taught, on the manner in which they should be taught, on the moral discipline that should accompany the teaching, on every step that can be taken, from the treatment of our infants up to a college examination, conflicting opinions exist. How strong and how well grounded are these contradictions of belief, we shall best perceive by glancing at a few of the specific objections to be raised.

"Gentlemen," may say some thoughtful citizen, "your synopsis of instruction contains much that I think comparatively valueless, and entirely leaves out subjects which seem to me of more importance than nearly all others. History occupies a prominent position in your list; but I see no mention of Physiology. Now, as my children will have but a few years' schooling, I deny the propriety of occupying their time in learning all about people who lived ages ago (a knowledge which will be of no daily benefit), when the time might otherwise be occupied in learning how their own bodies are made, and how they should be treated. No man's life was ever saved by knowing when the battle of Agincourt was fought, or how many wives Henry VIII. had; but every day, thousands go to their deaths from unwittingly sinning against the laws of their constitutions. You think him

grossly ignorant who cannot say whether it was Charles I. or Charles II. who was beheaded. I tell you that, judged by any rational standard, he is much more grossly ignorant who knows nothing about the nature and functions of the frame he lives in. What *you* call ignorance is harmless; what *I* call ignorance is often fatal. No, no; with such an absurd selection of subjects you shall educate no son of mine."

"It seems to me," objects another, "that your system is utterly unphilosophical in arrangement. Following the old precedent, you propose to begin with the alphabet; and, passing on from reading to writing and arithmetic, take the other subjects in turn. Yet this course, which you think so reasonable, I believe to be radically vicious. To me it is quite clear that the mind, like the body, has a natural order in which its faculties unfold; and that we must inquire what that order is, and conform to it. You would think him a foolish parent who tried to make his child's limbs and viscera develop in some particular succession which he fancied the best. You would tell him that if he but afforded the nourishment and exercise Nature craved, she would do the rest much better than he could. Nevertheless, this empirical scheme of culture in which, for aught I see, you have not at all consulted Nature, involves a similar folly; and what you would say in the analogous case, I now say to you; namely, that the true function of the teacher is to observe the order of evolution of the faculties, and constantly to supply that kind of knowledge which the mind shows itself fit to assimilate. A partial recognition of this truth is shown in the modern practice of beginning education with the discipline of the perceptions; and it will presently be seen that the same truth applies throughout. Now as your scheme ignores all this, and as I do not choose that my children should be stinted of facts for which their intellects hunger, while they are made to take in facts

which their intellects cannot properly digest, I must decline the tuition you offer."

"This learning by rote is a barbarism," a third exclaims. "So far from strengthening the memory, I hold that it weakens it. A good memory is one which retains an idea after a single impression ; a bad memory is one which cannot retain an idea until after many repetitions of the impression. Now, from the universal law that faculties can become strong only by exercise, and will become weak when not exercised, it follows that the memory must be strengthened by inducing a constant effort to remember facts, words, or expressions, after once hearing or reading them ; while, on the other hand, it follows that the memory must be weakened by rendering this effort needless. Your system of learning by rote *does* render it needless. With his lesson-book lying before him, and with the consciousness that he can refer to it as often as he likes, the schoolboy has no incentive to concentrate his attention. He allows his mind to wander off into every train of ideas that suggests itself ; knowing that he can come back to his task when he pleases. This habit grows upon him : he frequently almost loses the ability to control his erratic thoughts ; and finally falls into the practice of repeating the words he is learning in a semi-conscious way—half thinking of them, and half of something else. Thus, the power of mental concentration being comparatively unnecessary, diminishes. Hence the impressions received become less vivid ; that is, the memory becomes weaker. I cannot, therefore, avail myself of a course of culture which, like yours, is vitiated by so bad a method."

"To my mind," remarks a fourth, "your discipline seems faulty. I disapprove of managing children by rewards and punishments. In common with many others, I think that the love of praise is a sentiment already too strong in nearly all men ; and hence I object to a treatment which, by often gratifying

it, must make it still stronger. Equally to be deprecated are your modes of correction. Apparent perversities, both moral and intellectual, are in many cases more due to the teacher than the pupil : resulting, as they usually do, either from a non-adaptation of the subject to the age, or from a bad method. And when the pupil really is to blame, I hold that your harsh measures are nearly always detrimental. If lack of ability is the defect, a little sympathy and a few words of encouragement will do more than frowns and abuse ; and in cases of misbehaviour, a grave rebuke, kindly given by a master who makes himself the friend of his scholars, will succeed better than the blows of one who is regarded with enmity. Thinking thus, as I do, you must see that your system is quite unacceptable."

"I unite in all the objections," adds a fifth, "and entertain others of my own. With me, resistance is a point of conscience. These children of mine I regard as beings with whose welfare, bodily and mental, I stand charged ; and I conceive that I am acting unconsciously if I allow them to be treated in a manner which I believe hurtful. Now to me your scheme of education seems, in many respects, essentially vicious. Would it not, then, be a gross breach of duty in me to put my children under your care ? I pity you, if you say no. And if it *would* be a breach of duty, what am I to do but resist ? Am I to pay your education-rates and get nothing in return ? Perhaps you will answer, yes. I must tell you, however, that my conscience will no more permit me to do this than it will permit me to use your schools. Not only should I be aiding you to mis-educate my neighbour's children, which my desire for human welfare forbids, but I should be submitting to an injustice which I feel bound to oppose. Would you not consider it a duty to resist those who tried to enslave you ? Knowing how destructive of happiness slavery is, would you not look on yourself as a traitor to

humanity did you passively allow its establishment in your person? Of course you would. Well, on like grounds I must withstand this encroachment on my liberties. Believing, as I do, that it is for the well-being of mankind that the freedom of each should be unlimited save by the equal freedoms of all, I cannot conscientiously acquiesce in your aggressions. I tell you, therefore, that I will *not* put my children under your management. I tell you that I will *not*, at your dictation, pay towards other men's school-bills. And further, I tell you, that if you *will* have my property, you shall rob me of it; as the Church does."

Now, whatever he may think of these several grounds for nonconformity, the last of which has already been practically assumed in America, the advocate of State-education must admit that they are quite possible ones. He must admit, too, that such differences of opinion on juvenile culture have been increasing, and will probably continue to increase. He must admit that as, when men began to discuss theological questions, the original unity of belief gave place to divisions which have augmented with growing rapidity; so, now that education has become a subject of thought, the past uniformity of practice has been superseded by a variety of methods which promise to multiply still further. He must admit that, until psychology, of which we yet know but little, has been reduced to scientific co-ordination, and is universally understood, no general agreement as to the right conduct of education can become possible. He must further admit that the daily increase of enlightenment, by making men more alive to the importance of mental training, will render them more averse to putting their children under a questionable discipline. And, lastly, he must admit that, conspiring with this, the continued growth of that sense of personal rights which distinguishes modern civilization, will in course of time produce a determined dissent.

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Hence, its advocates cannot but confess that State-education is unjust. By seeking to draw a distinction between it and State-religion, they tacitly admit that, were there no distinction, State-education would be inadmissible. We have found that the assumed distinction does not hold good. Though, as regards belief in the things taught, the alleged want of parallelism exists, yet, as to modes of teaching, the same nonconformity is common to both. And if disapproval of its organization or government, its ceremonial forms or discipline, is allowed to be valid ground for dissent from a State-religion, it must be allowed that an analogous disapproval of its routine, methods, or course of culture, is valid ground for dissent from a State-education—an admission which can leave it no consistent supporters save churchmen.

The members of the Public School Association, and their rivals, the supporters of Mr. Richson's scheme, exhibit an energy and munificence much to be admired. Donations from £500 downwards testify to no small zeal for popular enlightenment. They who devote valuable time to the writing of tracts, newspaper letters, and leading articles, must have a strong interest in the success of their projects. Tired men of business, who give up their leisure to attend committees, show a praiseworthy spirit of self-sacrifice. The getting-up of public meetings, the preparation and delivery of lectures and speeches, the devising of Acts of Parliament, the obtaining signatures to petitions, the forming of local organizations, and the many other kinds of labour which these gentlemen undertake in the carrying on of their extensive agitation, prove how great a desire they have for the spread of knowledge. There is no law compelling them to act thus. No tax-gatherer comes round for their subscriptions, saying—"Your money or your goods." No penalty attaches to non-attendance at committees and meetings;

nor are the onerous offices many of them fill undertaken because refusal would entail a fine. All that they do they do willingly. Moreover, they expect to generate in the mass of the community a similar disinterested zeal. They issue books and pamphlets, deliver lectures and speeches, with a view to make men join and help them. And by persevering in this course—by raising more subscriptions, acquiring more members, having more meetings, circulating more reports, issuing more tracts, getting-up more petitions, and so, gradually increasing the number of those who will devote time or money to the cause, they hope ultimately to create a public opinion strong enough to embody their project in law.

Bearing in mind which facts, let these gentlemen, when next they estimate the efficiency of voluntaryism, include in their estimate what *they* have done and hope to do. Let them remember that the agency by which they expect to rouse the indifferent, unite the jealous, persuade the adverse—in short, to *educate* the people into their views—is the agency which they think so ridiculously inadequate to educate the people's children. To determine what this agency can do, they must assume legislative aid to be out of the question, and then add all their own energy to the energy of their opponents. That this energy is of the same nature in both, they cannot deny. Zeal for popular enlightenment is the motive force in each case; in each case this zeal produces active efforts; and though different means are chosen, yet these efforts are directed to the same end. Clearly, therefore, to judge how far knowledge may be diffused without State-aid, all the energy now directed, and to be hereafter directed, to the

obtaining of State-aid, must be added to the energy expended in our present teaching organizations.

If the State-educationists are startled at being thus classed as practical though unconscious voluntaries, they will be yet more startled on finding how much they expect voluntaryism to achieve. They wish to have, throughout the kingdom a system of schools under local control but supported by compulsory rates. This system they seek to establish by law. So to establish it they are carrying on an active agitation, in the hope of by-and-by, inducing a majority of the people to think with them. And, when the majority demands it, their project to receive legislative realization. To what state of feeling, then, do they hope to bring the majority? They hope so to interest them on behalf of this plan so to impress them with the importance of education, so to rouse their sympathy for the uncultured and their pity for the depraved, that they may say to the Government—"Let us be taxed that there may be enough schools and teachers." This is what the advocate of State-education hope by their voluntary efforts to make the majority say: no small feat, too, if they succeed in it. But now let them just ask themselves whether it is not possible that the same persevering persuasion which shall make the majority say,—"Let us be taxed that there may be enough schools and teachers," might as readily make them say,—"Let us provide schools and teachers ourselves." If the majority may be made so anxious for the spread of enlightenment as to wish the State to put its hands in their pockets, may not a little more persuasion make them put their own hands in their pockets?

## GOVERNMENT COLONIZATION

A COLONY being a community, to ask whether it is right for the State to found and govern colonies, is practically to ask whether it is right for one community to found and govern other communities. And this question not being one in which the relationships of a society to its own authorities are alone involved, but being one into which there enter the interests of men external to such society, is in some measure removed out of the class of questions hitherto considered. Nevertheless, our directing principle affords satisfactory guidance in this case as well as in others.

That a Government cannot undertake to administer the affairs of a colony, and to support for it a judicial staff, a constabulary, a garrison, and so forth, without trespassing against the parent society, scarcely needs pointing out. Any expenditure for these purposes, be it like our own some three and a half millions sterling a year, or but a few thousands, involves a breach of State-duty. The taking from men property beyond what is needful for the better securing of their rights, we have seen to be an infringement of their rights. Colonial expenditure cannot be met without property being so taken. Colonial expenditure is therefore unjustifiable.

An objector might indeed allege that, by maintaining in a settlement a subordinate legislature, the parent legislature does not discharge towards the settlers its original office of protector; and that the settlers have a claim to protection at its hands. But the duty of a society towards itself, that is, of a Government towards its subjects, will not permit the assumption of such a responsibility. For, as it is the function of a Government to administer the law of equal freedom, it cannot, without reversing its function, tax one portion of its subjects at a higher rate than is needful to protect them, that it may give

protection to another portion below prime cost; and to guard those who emigrate, at the expense of those who remain, is to do this.

In one way, however, legislative union between a parent State and its colonies may be maintained without breach of the law; namely, by making them integral parts of one empire, severally represented in a united assembly commissioned to govern the whole. But, theoretically just as such an arrangement may be, it is too palpably impolitic for serious consideration. To propose that, while the English joined in legislating for the people of Australia, of the Cape, of New Zealand, of Canada, of Jamaica, and of the rest, these should in turn legislate for the English and for each other, is much like proposing that the butcher should superintend the classification of the draper's goods, the draper draw up a tariff of prices for the grocer, and the grocer instruct the baker in making bread.

It was exceedingly cool of Pope Alexander VI. to parcel out the unknown countries of the Earth between the Spaniards and Portuguese, granting to Spain all discovered and undiscovered heathen lands lying West of a certain meridian drawn through the Atlantic, and to Portugal those lying East of it. Queen Elizabeth, too, was somewhat cool when she empowered Sir Humphrey Gilbert "to discover and take possession of remote and heathen countries," and "to exercise rights, royalties, and jurisdiction, in such countries and seas adjoining." Nor did Charles II. show less coolness, when he gave to Winthrop, Mason, and others, power to "kill, slay, and destroy, by all fitting ways, enterprises, and means whatsoever, all and every such person or persons as shall at any time hereafter attempt or enterprise the destruction, invasion, detriment, or

innoyance of the inhabitants," of the proposed plantation of Connecticut. Indeed, all colonizing expeditions down to those of our own day, with its American annexations, its French occupations of Algiers and Tahiti, and its British conquests of Scinde and of the Punjab, have borne a repulsive likeness to the doings of buccaneers. As usual, however, these unscrupulous acts have brought deserved retribution. Insatiate greediness has generated very erroneous beliefs, and betrayed nations into most disastrous deeds. "Men are rich in proportion to their acres," argued politicians. "An increase of estate is manifestly equivalent to an increase of wealth. What, then, can be clearer than that the acquirement of new territory must be a national advantage?" So, misled by the analogy, and spurred on by acquisitiveness, we have continued to seize province after province, in utter disregard of the losses entailed by them. In fact, it has been inconceivable that they do entail losses; and though doubt is beginning to dawn upon the public mind, the instinctive desire to keep hold is too strong to permit a change of policy. Our predicament is like that of the monkey in the fable, who, putting his hand into a jar of fruit, grasps so large a quantity that he cannot get his hand out again, and is obliged to drag the jar about with him, never thinking to let go what he has seized. When we shall attain to something more than the ape's wisdom remains to be seen.

While the mere propensity to thieve, commonly known under some grandiloquent alias, has been the real prompter of colonizing invasions, from those of Cortez and Pizarro downwards, the ostensible purpose of them has been either the spread of religion or the extension of commerce. In modern days the latter excuse has been the favourite one. To obtain more markets —this is what people have said aloud to each other, was the object aimed at.

And, though second to the widening of empire, it has been to the compassing of this object that colonial legislation has been mainly directed. Let us consider the worth of such legislation.

Those holy men of whom the middle ages were so prolific, seem to have delighted in exhibiting their supernatural powers on the most trifling occasions. It was a commonfeat with them, when engaged in church-building, magically to lengthen a beam which the carpenter had made too short. Some were in the constant habit of calling down fire from heaven to light their candles. When at a loss where to deposit his habiliments, St. Goar, of Treves, would transform a sunbeam into a hat-peg. And it is related of St. Columbanus that he wrought a miracle to keep the grubs from his cabbages. Now, although these examples of the use of vast means for the accomplishment of insignificant ends, are not quite paralleled by the exertions of Governments to secure colonial trade, the absurdity attaching to both differs only in degree. An expenditure of power ridiculously disproportionate to the occasion is their common characteristic. In the one case, as in the other, an unnatural agency is employed to effect what a natural agency would effect as well. Trade is a simple enough thing that will grow up wherever there is room for it. But, according to statesmen, it must be created by a gigantic and costly machinery. That trade only is advantageous to a country which brings in return for what is directly and indirectly given, a greater worth of commodities than could otherwise be obtained. But statesmen recognize no such limit to its benefits. Every new outlet for English goods, kept open at no matter what cost, they think valuable. Here is some scrubby little island, or wild territory—unhealthy, or barren, or inclement, or uninhabited even—which by right of discovery, conquest, or diplomatic manœuvring, may be laid hands on. Possession is forthwith taken; a high-salaried governor is appointed; officials collect round him;

then follow forts, garrisons, guardships. From these by-and-by come quarrels with neighbouring peoples, incursions, war; and these again call for more defensive works, more force, more money. And to all protests against this reckless expenditure, the reply is—"Consider how it extends our commerce." If you grumble at the sinking of £800,000 in fortifying Gibraltar and Malta, at the outlay of £130,000 a year for the defence of the Ionian Islands, at the maintenance of 1,200 soldiers in such a good-for-nothing place as the Bermudas, at the garrisoning of St. Helena, Hong Kong, Heligoland, and the rest, you are told that all this is needful for the protection of our commerce. If you object to the expenditure of £110,000 per annum on the Government of Ceylon, it is thought a sufficient answer that Ceylon buys manufactures from us to the gross value of £240,000 yearly. Any criticisms you may pass upon the policy of retaining Canada, at an annual cost of £800,000, are met by the fact that this amounts to only 30 per cent. upon the sum which the Canadians spend on our goods.<sup>1</sup> Should you, under the fear that the East India Company's debt may some day be saddled upon the people of England, lament the outlay of £17,000,000 over the Afghan war, the sinking of £1,000,000 a year in Scinde, and the swallowing up of untold treasure in the subjugation of the Punjab, there still comes the everlasting excuse of more trade. A Bornean jungle, the deserts of Kaffraria, and the desolate hills of the Falkland Islands, are all occupied upon this plea. The most profuse expenditure is forgiven, if but followed by an insignificant demand for merchandise: even though such demand be but for the supply of a garrison's necessities—glass for barrack windows, starch for officers' shirts, and lump-sugar for the governor's table: all of which you shall find carefully included in

Board of Trade Tables, and rejoiced over as constituting an increase in our exports!

But not only do we expend so much to gain so little, we absolutely expend it for nothing: nay, indeed, in some cases to achieve a loss. All profitable trade with colonies will come without the outlay of a penny for colonial administration—must flow to us naturally; and whatever trade will not flow to us naturally, is not profitable, but the reverse. If a given settlement deals solely with us, it does so from one of two causes: either we make the articles its inhabitants consume at a lower rate than any other nation, or we oblige its inhabitants to buy those articles from us, though they might obtain them for less elsewhere. Manifestly, if we can undersell other producers, we should still exclusively supply its markets were the settlement independent. If we cannot undersell them, it is equally certain that we are indirectly injuring ourselves and the settlers too; for, as McCulloch says:—"Each country has some natural or acquired capabilities that enable her to carry on certain branches of industry more advantageously than any one else. But the fact of a country being undersold in the markets of her colonies, shows conclusively that, instead of having any superiority, she labours under a disadvantage, as compared with others, in the production of the peculiar articles in demand in them. And hence, in providing a forced market in the colonies for articles that we should not otherwise be able to dispose of, we really engage a portion of the capital and labour of the country in a less advantageous channel than that into which it would naturally have flowed." And if, to the injury we do ourselves by manufacturing goods which we could more economically buy, is added the injury we suffer in pacifying the colonists, by purchasing from them commodities obtainable on better terms elsewhere, we have before us the twofold loss which these much-coveted monopolies entail.

<sup>1</sup> For these and other such facts, see Sir W. Molesworth's speeches delivered during the sessions of 1848 and 1849.

Thus are we again taught how worthy of all reverence are the injunctions of equity, and how universal is their applicability. Just that commercial intercourse with colonies which may be had without breaking these injunctions, brings gain, while just that commercial intercourse which cannot be so had, brings loss.

Passing from home interests to colonial interests, we still meet nothing but evil results. It is a prettily sounding expression, that of mother-country protection, but a very delusive one. If we are to believe those who have known the thing rather than the name, there is but little of the maternal about it. In the Declaration of American Independence we have a candid statement of experience on this point. Speaking of the king—the personification of the parent State the settlers say :—

“ He has obstructed the administration of justice, by refusing his assent to laws for establishing judiciary powers.

“ He has erected a multitude of new offices, and sent hither swarms of officers to harass our people, and eat out their substance.

“ He has kept among us in times of peace standing armies, without the consent of our legislatures.

“ He has combined with others to subject us to a jurisdiction foreign to our constitution and unacknowledged by our laws; giving his assent to their pretended acts of legislation :—

“ For quartering large bodies of armed troops among us.

“ For protecting them by a mock trial from punishment for any murders which they should commit on the inhabitants of these states.

“ For cutting off our trade with all parts of the world.

“ For imposing taxes upon us without our consent.

“ For depriving us in many cases of the benefits of trial by jury,” &c., &c., &c.

Now, though tyrannies so atrocious as these do not commonly disgrace colonial legislation in the present day, we have but to glance over the newspapers published in our foreign possessions, to see that the arbitrary rule of the Colonial Office is no blessing. Two outbreaks in fifteen years pretty plainly hint the feeling of the Canadas. Within the same period the Cape Boers have revolted thrice; and we have just had a tumultuous agitation and a violent paper war about convicts. In the West Indies there is universal discontent. Jamaica advices tell of stopped supplies, and State-machinery at a dead lock. Guiana sends like news. Here are quarrels about re-trenchment; there, insurrectionary riots; and anger is everywhere. The name of Ceylon calls to mind the insolence of a titled governor on the one side, and on the other the bitterness of insulted colonists. In the Australian settlements, criminal immigration has been the sore subject; while from New Zealand there come protests against official despotism. All winds bring the same tale of a negligence caring for no expostulations, impertinence without end, blunderings, disputes, delays, corruption. Canadians complain of having been induced by a proffered privilege to sink their capital in flour-mills, which subsequent legislation made useless. With an ever varying amount of protection, sugar-planters say they do not know what to be at. South Africa bears witness to a mismanagement that at one time makes enemies of the Griquas, and at another entails a Kafir war. The emigrants of New Zealand lament over a seat of government absurdly chosen, money thrown away upon useless roads, and needful works left undone. South Australia is made bankrupt by its governor's extravagance; lands are apportioned so as to barbarize the settlers by dispersion; and labourers are sent out in excess, and left to beg. Our Chinese trade gets endangered by the insulting behaviour of military officers to the natives; and the authorities of

Labuan make their first settlement in a pestilential swamp.

Nevertheless, these results of mother-country protection need not surprise us, if we consider by whom the duties of maternity are discharged. Dotted here and there over the Earth, at distances varying from one thousand to fourteen thousand miles, and to and from some of which it takes three-quarters of a year to send a question and get back an answer, are forty-six communities, consisting of different races, placed in different circumstances. And the affairs of these numerous, far-removed communities—their commercial, social, political, and religious interests, are to be cared for—by whom? By six functionaries and their twenty-three clerks, sitting at desks in Downing Street! being at the rate of 0·13 of a functionary and half a clerk to each settlement!

Great, however, as are the evils entailed by government colonization upon both parent State and settlers, they look insignificant when compared with those it inflicts on the aborigines of the conquered countries. The people of Java believe that the souls of Europeans pass at depth into the bodies of tigers: and it is related of a Hispaniolan chief that he hoped not to go to heaven when he heard there would be Spaniards there. Significant facts these: darkly suggestive of many an unrecorded horror. But they hint nothing worse than history tells of. Whether we think of the extinct West-Indian tribes, who were worked to death in mines; or of the Cape Hottentots, whose masters punished them by shooting small shot into their legs; or of those nine thousand Chinese whom the Dutch massacred one morning in Batavia; or of the Arabs lately suffocated in the caves of Dahra by the French; we do but call to mind solitary samples of the treatment commonly received by subjugated races from so-called Christian nations. Should any one flatter himself that we English are guiltless of such barbarities, he may soon be shamed

by a narrative of our doings in the East. The Anglo-Indians of the last century—“birds of prey and of passage,” as they were styled by Burke—showed themselves only a shade less cruel than their prototypes of Peru and Mexico. Imagine how black must have been their deeds, when even the Directors of the Company admitted that “the vast fortunes acquired in the inland trade have been obtained by a scene of the most tyrannical and oppressive conduct that was ever known in any age or country.” Conceive the atrocious state of society described by Vansittart, who tells us that the English compelled the natives to buy or sell at just what rates they pleased, on pain of flogging or confinement. Judge to what a pass things must have come when, in describing a journey, Warren Hastings says, “most of the petty towns and *serais* were deserted at our approach.” A cold-blooded treachery was the established policy of the authorities. Princes were betrayed into war with each other; and one of them having been helped to overcome his antagonist, was then himself dethroned for some alleged misdemeanour. Always some muddled stream was at hand as a pretext for official wolves. Dependent chiefs holding coveted lands were impoverished by exorbitant demands for tribute; and their ultimate inability to meet these demands was construed into a treasonable offence, punished by deposition. Even down to our own day kindred iniquities are continued.<sup>1</sup> Down to our own day, too, are continued the grievous salt-monopoly, and the pitiless taxation which wrings from the poor ryots nearly half the produce of the soil. Down to our own day continues the cunning despotism which uses native soldiers to maintain and extend native subjection—a despotism under which, not many years since, a regiment of sepoys was deliberately massacred for refusing to march without proper clothing. Down to our own day the police authorities

<sup>1</sup> See Sir Alexander Burns' despatches.

league with wealthy scamps, and allow the machinery of the law to be used for purposes of extortion. Down to our own day, so-called gentlemen will ride their elephants through the crops of impoverished peasants ; and will supply themselves with provisions from the native villages without paying for them. And down to our own day, it is common with the people in the interior to run into the woods at sight of a European !

No one can fail to see that these cruelties, these treacheries, these deeds of blood and rapine, for which European nations in general have to blush, are mainly due to the carrying on of colonization under State-management, and with the help of State-funds and State-force. It is quite needless to point to the recent affair at Waitau in New Zealand, or to the Kaffir war, or to our perpetual aggressions in the East, or to colonial history at large, in proof of this, for the fact is self-evident. A schoolboy, made overbearing by the consciousness that there is always a big brother to take his part, typifies the colonist, who sees in his mother-country a bully ever ready to back and defend him. Unprotected emigrants, landing among a strange race, and feeling themselves the weaker party, are tolerably certain to behave well ; and a community of them is likely to grow up in amicable relationship with the natives. But let these emigrants be followed by regiments of soldiers—let them have a fort built and cannons mounted—let them feel that they have the upper hand ; and they will no longer be the same men. A brutality will come out which the discipline of civilized life had kept under ; and not unfrequently they will prove more vicious than they even knew themselves to be. Various evil influences conspire with their own bad propensities. The military force guarding them has a strong motive to foment quarrels ; for war promises prize-money. To the civil officials, conquest holds out a prospect of more berths and quicker promotion—a fact which must bias them in favour of it. Thus an

aggressive tendency is encouraged in all, and betrays colonists into those atrocities that disgrace civilization.

As though to round off the argument, history gives proof that while Government-colonization is accompanied by endless miseries and abominations, colonization naturally carried on is free from these. To William Penn belongs the honour of having shown men that the kindness, justice, and truth of its inhabitants are better safeguards to a colony than troops and fortifications and the bravery of governors. In all points Pennsylvania illustrates the equitable, as contrasted with the inequitable, mode of colonizing. It was founded not by the State but by private individuals. It needed no mother-country protection, for it committed no breaches of the moral law. Its treaty with the Indians, described as "the only one ever concluded which was not ratified by an oath, and the only one that was never broken," served it in better stead than any garrison. For the seventy years during which the Quakers retained the chief power, it enjoyed an immunity from that border warfare, with its concomitant losses, and fears, and bloodshed, to which other settlements were subject. Contrariwise, its people maintained a friendly and mutually-beneficial intercourse with the natives ; and, as a natural consequence of complete security, made unusually rapid progress in material prosperity.

That a like policy would have been similarly advantageous in other cases, may reasonably be inferred. No one can doubt, for instance, that had the East India Company been denied military aid and State-conferred privileges, both its own affairs and the affairs of Hindostan, would have been in a far better condition than they now are. Insane longing for empire would never have burdened the Company with the enormous debt which paralyzes it. The energy perpetually expended in aggressive wars would have been employed

in developing the resources of the country. And had the settlers thus turned their attention wholly to commerce, and conducted themselves peaceably, as their defenceless state would

have compelled them to do, England would have been better supplied with raw materials and the markets for her goods would have enlarged.

## SANITARY SUPERVISION

THE current ideas respecting legislative interference in sanitary matters, do not seem to have taken the form of a definite theory. The Eastern Medical Association of Scotland does indeed hold "that it is the duty of the State to adopt measures for protecting the health as well as the property of its subjects"; and *The Times* lately asserted that "the Privy Council is chargeable with the health of the Empire";<sup>1</sup> but no considerable political party has adopted either of these dogmas by way of a distinct confession of faith.

That it comes within the proper sphere of government to repress nuisances is evident. He who contaminates the atmosphere breathed by his neighbour, is infringing his neighbour's rights. Men have equal claims to the free use of the elements, and having that exercise more or less limited by whatever makes the elements more or less unusable, are obviously trespassed against by any one who unnecessarily vitiates the elements, and renders them detrimental to health, or disagreeable to the senses; and in the discharge of its function as protector a government is called upon to afford redress to those so trespassed against.

Beyond this, however, it cannot lawfully go. As already shown in several kindred cases, for a government to take from a citizen more property than is needful for the efficient defence of that citizen's rights, is to infringe his rights. And

hence all taxation for sanitary superintendence coming, as it does, within this category, must be condemned.

The theory which Boards of Health and the like imply, is not only inconsistent with our definition of State-duty, but is open to strictures similar to those made in analogous cases. If, by saying "that it is the duty of the State to adopt measures for protecting the health of its subjects," it is meant (as it is meant by the majority of the medical profession) that the State should interpose between quacks and those who patronize them, or between the druggist and the artizan who wants a remedy for his cold—if it is meant that to guard people against empirical treatment, the State should forbid all unlicensed persons from prescribing; then the reply is, that to do so is directly to violate the moral law. Men's rights are infringed by these, as much as by all other, trade-interferences. The invalid is at liberty to buy medicine and advice from whomsoever he pleases; the unlicensed practitioner is at liberty to sell these to whomsoever will buy. On no pretext can a barrier be set up between the two, without the law of equal freedom being broken; and least of all may the Government, whose office it is to uphold that law, become a transgressor of it.

Moreover this doctrine, that it is the duty of the State to protect the health of its subjects, cannot be established, for the same reason that its kindred doctrines

<sup>1</sup> See *The Times*, October 17, 1848.

cannot, namely, the impossibility of saying how far the alleged duty shall be carried. Health depends on the fulfilment of numerous conditions—can be “protected” only by insuring that fulfilment. If, therefore, it is the duty of the State to protect the health of its subjects, it is its duty to see that all the conditions to health are fulfilled by them. The legislature must prescribe so many meals a day for each individual; fix the quantities and qualities of food, for men, women, and children; state the proportion of fluids, when to be taken, and of what kind; specify the amount of exercise, and define its character; describe the clothing to be employed; determine the hours of sleep; and to enforce these regulations it must employ officials to oversee every one's domestic arrangements. If, on the other hand, a universal supervision of private conduct is not meant, then there comes the question—Where, between this and no supervision at all, lies the boundary up to which supervision is a duty?

There is a manifest analogy between committing to Government-guardianship the physical health of the people, and committing to it their moral health. If the welfare of men's souls can be fitly dealt with by acts of parliament, why then the welfare of their bodies can be fitly dealt with likewise. The disinfecting society from vice may naturally be cited as a precedent for disinfecting it from pestilence. Purifying the haunts of men from noxious vapours may be held quite as legitimate as purifying their moral atmosphere. The fear that false doctrines may be instilled by unauthorized preachers, has its analogue in the fear that unauthorized practitioners may give deleterious medicines or advice. And the prosecutions once committed to prevent the one evil, countenance the penalties used to put down the other. Contrariwise, the arguments employed by the dissenter to show that the moral sanity of the people is not a matter for State-superintendence, are applicable, with a

slight change of terms, to their physical sanity also.

Let no one think this analogy imaginary. The two notions are not only theoretically related; we have facts proving that they tend to embody themselves in similar institutions. There is an inclination on the part of the medical profession to get itself organized after the fashion of the clergy. Little do the public at large know how actively professional publications are agitating for State-appointed overseers of the public health. Take up the *Lancet*, and you will find articles written to show the necessity of making poor-law medical officers independent of Boards of Guardians, by appointing them for life, holding them responsible only to central authority, and giving them handsome salaries from the Consolidated Fund. The *Journal of Public Health* proposes that “every house on becoming vacant be examined by a competent person as to its being in a condition adapted for the safe dwelling in of the future tenants”; and to this end would raise by fees, chargeable on the landlords “a revenue adequate to pay a sufficient staff of inspectors four or five hundred pounds a year each.” A non-professional publication, echoing the appeal, says “No reasonable men can doubt that a proper system of ventilation were rendered imperative upon landlords, no only would the cholera and other epidemic diseases be checked, but the general standard of health would be raised.” While the *Medical Times* shows its leanings by announcing, with marked approbation, that “the Ottoman Government has recently published a decree for the appointment of physicians to be paid by the State,” who “are bound to treat gratuitously all—both rich and poor—who shall demand advice.”

The most specious excuse for not extending to medical advice the principle of free trade, is the same as that given for not leaving education to be diffuse under them; namely, that the judgment of the consumer is not a sufficient guar-

antee for the goodness of the commodity. The intolerance shown by orthodox surgeons and physicians towards unordained followers of their calling, is to be understood as arising from a desire to defend the public against quackery. Ignorant people, say they, cannot distinguish good treatment from bad, or skilful advisers from unskilful ones: hence it is needful that the choice should be made for them. And then, following in the track of priesthoods, for whose persecutions a similar defence has always been set up, they agitate for more stringent regulations against unlicensed practitioners, and descant upon the dangers to which men are exposed by an unrestricted system. Hear Mr. Wakley. Speaking of a recently-revived law relating to chemists and druggists, he says—"It must have the effect of checking, to a vast extent, that frightful evil called counter-practice, exercised by unqualified persons, which has so long been a disgrace to the operation of the laws relating to medicine in this country, and which, doubtless, has been attended with a dreadful sacrifice of human life." (*Lancet*, September 11, 1841.) And again, "There is not a chemist and druggist in the empire who would refuse to prescribe in his own shop in medical cases, or who would hesitate day by day to prescribe simple remedies for the ailments of infants and children." . . . "We had previously considered the evil to be of enormous magnitude, but it is quite clear that we had under-estimated the extent of the danger to which the public are exposed." (*Lancet*, October 16, 1841.)

Any one may discern through these judicious exaggerations much more of the partizan than of the philanthropist. But let that pass. And without dwelling upon the fact that it is strange a "dreadful sacrifice of human life" should not have drawn the attention of the people themselves to this "frightful evil,"—without doing more than glance at the further fact, that nothing is said of those benefits conferred by "counter-practice," which would at least form a

considerable set off against this "evil of enormous magnitude"; let it be conceded that very many of the poorer classes are injured by druggists' prescriptions and quack medicines.<sup>1</sup> The allegation having been thus, for argument's sake, admitted in full, let us now consider whether it constitutes a sufficient plea for legal interference.

Inconvenience, suffering, and death, are the penalties attached by Nature to ignorance, as well as to incompetence— are also the means of remedying these. Partly by weeding out those of lowest development, and partly by subjecting those who remain to the never-ceasing discipline of experience, Nature secures the growth of a race of men who shall both understand the conditions of existence, and be able to act up to them. It is impossible in any degree to suspend this discipline by stepping in between ignorance and its consequences, without, to a corresponding degree, suspending the progress. If to be ignorant were as safe as to be wise, no one would become wise. And all measures which tend to put ignorance upon a par with wisdom, inevitably check the growth of wisdom. Acts of Parliament to save silly people from the evils which putting faith in empirics may entail on them, do this, and are therefore bad. It is best to let the foolish man suffer the penalty of his foolishness. For the pain he must bear it as well as he can: for the experience—he must treasure it up, and act more rationally in future. To others as well as to himself will his case be a warning. And by multiplication of such warnings, there cannot fail to be generated a caution corresponding to the danger to be shunned.

A sad population of imbeciles would our schemers fill the world with, could their plans last. A sorry kind of human constitution would they make for us—a

<sup>1</sup> The infliction of such injuries is not peculiar to quacks. During the last four years (I add this note in 1890) I have had occasion to consult seven medical men, and six out of the seven did me harm!

constitution continually going wrong, and needing to be set right again—a constitution ever tending to self-destruction. Why the whole effort of Nature is to get rid of such—to clear the world of them, and make room for better. Mark how the diseased are dealt with. Consumptive patients, with lungs incompetent to perform the duties of lungs, people with digestive organs that will not take up enough nutriment, people with defective hearts which break down under effort, people with any constitutional flaw preventing due fulfilment of the conditions of life, are continually dying out, and leaving behind those fit for the climate, food, and habits to which they are born. Even the less-imperfectly organized who, under ordinary circumstances, manage to live with comfort, are still the first to be carried off by adverse influences; and only such as are robust enough to resist these—that is, only such as are tolerably well adapted to both the usual and incidental necessities of existence, remain. And thus is the race kept free from vitiation. Of course this statement is in substance a truism; for no other arrangements of things is conceivable. But it is a truism to which most men pay little regard. And if they commonly overlook its application to body, still less do they note its bearing upon mind. Yet it is equally true here. Nature just as much insists on fitness between mental character and circumstances, as between physical character and circumstances; and radical defects are as much causes of death in the one case as in the other. He on whom his own stupidity, or vice, or idleness, entails loss of life, must, in the generalizations of philosophy, be classed with the victims of weak viscera or malformed limbs. In his case, as in the others, there exists a fatal non-adaptation; and it matters not in the abstract whether it be a moral, an intellectual, or a corporeal one. Beings thus imperfect are Nature's failures, and are recalled by her when found to be such. Along with the rest they are put

upon trial. If they are sufficiently complete to live, they *do* live, and it is well they should live. If they are not sufficiently complete to live, they die, and it is best they should die. And however irregular the action of this law may appear—however it may seem that much chaff is left behind which should be winnowed out, and that much grain is taken away which should be left behind; yet due consideration must satisfy every one that the *average* effect is to purify society from those who are, *in some respect or other*, essentially faulty.

Of course, in so far as the severity of this process is mitigated by the spontaneous sympathy of men for one another, it is proper that it should be mitigated: albeit there is unquestionably harm done when sympathy is shown, without any regard to ultimate results. But the drawbacks hence arising are nothing like commensurate with the benefits otherwise conferred. Only when this sympathy prompts to a breach of equity—only when it originates an interference forbidden by the law of equal freedom—only when, by so doing, it suspends in some particular department of life the relationship between constitution and conditions, does it work pure evil. Then, however, it defeats its own end. It favours the multiplication of those worst fitted for existence, and, by consequence, hinders the multiplication of those best fitted for existence—leaving, as it does, less room for them. It tends to fill the world with those to whom life will bring most pain, and tends to keep out of those to whom life will bring most pleasure. It inflicts positive misery, and prevents positive happiness.

Turning now to consider these impatiently-agitated schemes for improving our sanitary condition by Act of Parliament, the first criticism to be passed on them is that they are needless, inasmuch as there are already efficient influences at work gradually accomplishing every desideratum.

Seeing, as do the philanthropic of our

day, like the congenitally blind to whom sight has just been given, they form very crude and very exaggerated notions of the evils to be dealt with. Some, anxious for the enlightenment of their fellows, collect statistics exhibiting a lamentable amount of ignorance; publish these; and the lovers of their kind are startled. Others dive into the dens where poverty hides itself, and shock the world with descriptions of what they see. Others, again, gather together information respecting crime, and make the benevolent look grave by their disclosures. Whereupon, in horror at these revelations, men keep thoughtlessly assuming that the evils have lately become greater, when in reality it is they who have become more observant of them. If few complaints have hitherto been heard about crime, and ignorance, and misery, it is not that in times past these were less widely spread, for the contrary is the fact; but it is that our forefathers thought little about them, and said little about them. Overlooking which circumstance, and forgetting that social evils have been undergoing a gradual amelioration, many entertain a needless alarm lest fearful consequences should ensue, if these evils are not immediately remedied, and a visionary hope that immediate remedy of them is possible.

Such are the now prevalent feelings relative to sanitary reform. We have had a multitude of blue-books, Board of Health reports, leading articles, pamphlets, and lectures, descriptive of bad drainage, overflowing cesspools, festering graveyards, impure water, and the filthiness and humidity of low lodging houses. The facts thus published are thought to warrant, or rather to demand, legislative interference. It seems never to be asked, whether any corrective process is going on. Although the rate of mortality has been gradually decreasing, and the value of life is higher in England than elsewhere—although the cleanliness of our towns is greater now than ever before, and our spontaneously-

grown sanitary arrangements are far better than those existing on the Continent, where the stinks of Cologne, the uncovered drains of Paris, the water-tubs of Berlin,<sup>1</sup> and the miserable footways of the German towns, show what State-management effects; yet it is perversely assumed that by State-management only can the remaining impediments to public health be removed. Surely the causes which have brought the sewage, the paving and lighting, and the water-supply of our towns, to the present state, have not suddenly ceased. Surely that amelioration which has been taking place in the condition of London for these two or three centuries, may be expected to continue. Surely the public spirit which has carried out so many urban improvements since the Municipal Corporations Act gave greater facilities, can carry out other improvements. One would have thought that less excuse for meddling existed now than ever. Now that so much has been effected; now that the laws of health are beginning to be generally studied; now that people are reforming their habits of living; now that the use of baths is spreading; now that temperance, and ventilation, and due exercise are getting thought about—to interfere *now*, of all times, is surely as rash and uncalled-for a step as was ever taken.

And then to think that, in their haste to obtain by law healthier homes for the masses, men should not see that the natural process already commenced is the only process which can eventually succeed! The Metropolitan Association for improving the Dwellings of the Labouring Classes is doing all that is possible in the matter. It is endeavouring to show that, under judicious management, the building of salubrious habitations for the poor becomes a profitable employment of capital. If it

<sup>1</sup> For putting out fires in Berlin they depend on open tubs of water that stand about the city at certain points, ready to be dragged where they are wanted. [Since 1850 an English firm has changed all this.]

shows this, it will do all that needs to be done; for capital will quickly flow into investments offering good returns. If it does *not* show this—if, after due trial, it finds that these Model Lodging Houses do not pay, then Acts of Parliament will not improve matters.<sup>1</sup> These plans for making good ventilation imperative; insisting upon water-supply, and fixing the price for it, as Lord Morpeth's Bill would have done; having empty houses cleansed before re-occupation, and charging the owners of them for inspection—these plans for coercing landlords into giving additional advantages for the same money are nothing but repetitions of the old proposal, that “the three-hooped pot shall have ten hoops,” and are just as incapable of realization. The first result of an attempt to carry them out would be a diminution of the profits of house-owners. The interest on capital invested in houses no longer being so high, capital would seek other investments. The building of houses would cease to keep pace with the growth of population. Hence would arise a gradual increase in the number of occupants to each house. And this change in the ratio of houses to people would continue until the demand for houses had raised the profits of the landlord to what they were, and until, by overcrowding, new sanitary evils had been produced to parallel the old ones.<sup>2</sup>

<sup>1</sup> I ought to have said that Acts of Parliament can remove the evils complained of only by inflicting other evils; but at that time no one dreamed that the advance of Socialism would be so rapid that in 40 years municipal governments would make rate-payers pay part of the rents of working-class houses; for this is what is done when by public funds they are supplied with better houses than they would otherwise have.

<sup>2</sup> Such results have actually been brought about by the Metropolitan Buildings Act. While this Act has introduced some reform in the better class of houses (although to nothing like the expected extent, for the surveyors are bribed, and moreover the fees claimed by them for inspecting every trifling alteration operate as penalties on improvement), it has entailed far more evil, just where it was intended to confer benefit. An architect and surveyor describes it as having worked after the following manner.

If, by building in larger masses and to a greater height, such an economy can be achieved in ground-rent, the cost of outer walls, and of roofing, as to give more accommodation at the same expense as now (which happily seems probable); then the fact only needs proving, and, as before said, the competition of capital for investment will do all that can be done; but if not, the belief that legislative coercion can make things better is a fit companion to the belief that it can fix the price of bread and the rate of wages.

Let those who are anxious to improve

In those districts of London consisting of inferior houses, built in that insubstantial fashion which the New Buildings Act was to mend, there obtains an average rent, sufficiently remunerative to landlords whose houses were run up economically before the New Buildings Act passed. This existing average rent fixes the rent that must be charged in these districts for new houses of the same accommodation—that is, the same number of rooms, for the people they are built for do not appreciate the extra safety of living within walls strengthened with hoop-iron bond. Now it turns out upon trial, that houses built in accordance with the present regulations and let at this established rate, bring in nothing like a reasonable return. Builders have consequently confined themselves to erecting houses in better districts (where the possibility of a profitable competition with pre-existing houses shows that those pre-existing houses were tolerably substantial), and have ceased to erect dwellings for the masses, except in the suburbs where no pressing sanitary evils exist. Meanwhile, in the inferior districts above described, there has resulted an increase of overcrowding, half a dozen families in a house, a score lodgers to a room. Nay, more than this has resulted. That state of miserable dilapidation into which these abodes of the poor are allowed to fall, is due to the absence of competition from new houses. Landlords do not find their tenants tempted away by the offer of better accommodation. Repairs, being unnecessary for securing the largest amount of profit, are not made. And the fees demanded by the surveyor, even when an additional chimney-pot is put up, supply ready excuses for doing nothing. Thus, while the New Buildings Act has caused some improvement where improvement was not greatly needed, it has caused none where it was needed, but has instead generated evils worse than those it was to remove. In fact, for a large percentage of the very horrors which our sanitary agitators are now trying to cure by law, we have to thank previous agitators of the same school.

he health of the poor, through the indirect machinery of law, bring their *real* to bear *directly* upon the work to be done. Let them appeal to men's sympathies, and again to their interests. Let them show that the productive powers of the labourer will be increased by bettering his health, while the poor's rates will be diminished. Above all, let them demand the removal of those obstacles which existing legislation puts in the way of sanitary improvement.<sup>1</sup> Their efforts thus directed will really promote progress. Whereas their efforts is now directed are either needless or injurious.

It is in this case, as in many others, the peculiarity of what are oddly styled "practical measures," that they supersede agencies which are answering well by agencies which are not likely to answer well. Here is a heavy charge of inefficiency brought against the drains, cesspools, stink-traps, &c., of England in general and London in particular. The evidence is voluminous and conclusive, and by common consent a verdict of proven is returned. Citizens look grave and determine to petition Parliament about it. Parliament promises to consider the matter; and after the usual

<sup>1</sup> Writing before the repeal of the brick-duty, Mr. *Builder* says:—"It is supposed that one fourth of the cost of a dwelling which lets for 2s. *6d.* or 3s. a week is caused by the expense of the title-deeds and the tax on wood and bricks used in its construction. Of course the owner of such property must be remunerated, and he therefore charges 7s. *6d.* or 9s. a week to cover these burdens." Mr. C. Gathiff, secretary to the Society for Improving the Dwellings of the Working Classes, describing the effect of the window-tax, says:—"They are now paying upon their institution in St. Pancras, the sum of £162 16s. in window-duties, or 1 per cent. per annum upon the original outlay. The average rental paid by the Society's tenants is 5s. *6d.* per week, and the window-duty deducts from this 7s. *6d.* per week."—Deputation to Lord Ashley, see *The Times*, January 31, 1850. Mr. W. Volter, a master-tailor, says—"I lately inserted one of Dr. Arnott's ventilators in the chimney of the work-shop, little thinking I should be called upon by Mr. Badger, *or* district surveyor, for a fee of 25s."—*Morning Chronicle*, February 4, 1850.

amount of debate, says—"Let there be a Board of Health." Whereupon petitioners rub their hands, and look out for great things. They have unbounded simplicity—these good citizens. Legislation may disappoint them fifty times running, without at all shaking their faith in its efficiency. They hoped that Church abuses would be rectified by the Ecclesiastical Commission: the poor curates can say whether that hope has been realized. Backed by an Act of Parliament, the Poor-Law Commissioners were to have eradicated able-bodied pauperism: yet, until checked by the recent prosperity, the poor's-rates have been rapidly rising to their old level. The New Buildings Act was to have given the people of London better homes; whereas, as we lately saw, it has made worse the homes that most wanted improving. Men were sanguine of reforming criminals by the silent system, or the separate system; but, if we are to judge by the disputes of their respective advocates, neither of these plans is very successful. Pauper children were to have been made into good citizens by industrial education; from all quarters, however, come statements that a very large percentage of them get into gaol or become prostitutes, or return to the workhouse. The measures enjoined by the Vaccination Act of 1850 were to have exterminated small-pox; but the Registrar-General's reports show that the deaths from small-pox have been increasing. Yet scarcely a doubt seems to arise respecting the competency of legislators to do what they propose. From the times when they tried to fix the value of money down to our own day, when they have just abandoned the attempt to regulate the price of corn, statesmen have been undertaking all kinds of things, from prescribing the cut of boot-toes, up to preparing people for Heaven; and have been constantly failing. Nevertheless such inexhaustible faith have men that, although they see this, and although they are daily hearing of imbecilities in public departments—of

Admiralty Boards which squander three millions a year in building bad ships and breaking them up again—of Woods and Forests Commissioners who do not even know the rental of the estates they manage—of bungling excise-chemists who commit their chiefs to losing prosecutions, for which compensation has to be made; yet Government needs but to announce another plausible project, and men straightway hurrah, and throw up their caps, in the full expectation of getting all that is promised.

But the belief that Boards of Health, and the like, will never effect what is hoped, needs not wholly rest either on abstract considerations, or on our experience of State-instrumentalities in general. We have one of these organizations at work, and, as far as may be at present judged, it has done anything but answer people's expectations. To condemn it because choked sewers, and open gully-holes, and filthy alleys remain much as they were, would, perhaps, be unreasonable; for time is needed to rectify evils so widely established. But there is one test by which we may fairly estimate its efficiency; namely, its conduct before and during the late pestilence. It had more than a year's notice that the cholera was on its way here. There were two whole sessions of Parliament intervening between the time when a second invasion from that disease was foreseen, and the time when the mortality was highest. The Board of Health had, therefore, full opportunity to put forth its powers, and to get greater powers if it wanted them. Well, what was the first step which might have been looked for from it? Shall we not say the suppression of intramural interments? Burying the dead in the midst of the living was manifestly hurtful; the evils attendant on the practice were universally recognized; and to put it down required little more than a simple exercise of authority. If the Board of Health believed itself possessed of authority sufficient for this, why did it

not use that authority when the advent of the epidemic was rumoured? If I thought its authority not great enough (which can hardly be, remembering what it ultimately did), then why did it not obtain more? Instead of taking either of these steps, however, it occupied itself in considering future modes of water-supply, and devising systems of sewage. While the cholera was approaching, the Board of Health was cogitating over reforms from which the most sanguine could not expect an considerable benefit for years to come. And then, when the enemy was upon us, this guardian in which men were putting their trust, suddenly bestirred itself, and did what, for the time being made worse the evils to be remedied. As was said by a speaker, at one of the medical meetings held during the height of the cholera, "the Commissioners of Public Health had adopted the very means likely to produce the complaint. Instead of taking their measures years ago, they had stirred up all sorts of abominations now. They had removed dunghills and cesspools, and added fuel tenfold to the fire that existed. (Hear, hear.) Never since he could recollect had there been such accumulations of abominable odours as since the Health of Towns Commission had attempted to purify the atmosphere. (A laugh, and Hear, hear.)" At length when, in spite of all that had been done (or, perhaps, partly in consequence of it), the mortality continued to increase, the closing of graveyards was decided upon; in the hope, as we must suppose, that the mortality would thereby be checked. As though, when there were hundreds of thousands of bodies decomposing, the ceasing to add to them would immediately produce an appreciable effect!

Even could State-agency compass for our towns the most perfect salubrity, it would be in the end better to remain as we are, rather than obtain such a benefit by such means. It is quite possible to

give too much even for a great desideratum. However valuable good bodily health may be, it is dearly purchased when mental health goes in exchange. Whoso thinks that Government can supply sanitary advantages for nothing, or at the cost of more taxes only, is woefully mistaken. They must be paid for with character as well as with taxes.

Let it be again remembered that men cannot *make* force. All they can do is to avail themselves of force already existing, and employ it for working out this or that purpose. They cannot increase it ; they cannot get from it more than its due effect ; and as much as they expend of it for doing one thing, must they lack of it for doing other things. Thus it is now becoming a received doctrine, that what we call chemical affinity, heat, light, electricity, magnetism, and motion, are all manifestations of the same primordial force—that they are convertible into one another ; and, as a corollary, that it is impossible to obtain in any one form of this force more than its equivalent in the previous form. Now this is equally true of the agencies acting in society. It is quite possible to divert the power at present working out one result, to the working out of some other result. But you cannot make more of it, and you cannot have it for nothing. Just as much better as this particular thing is done, so much worse must another thing be done.

Or, changing the illustration, and regarding society as an organism, we may say that it is impossible artificially to use up social vitality for the more active performance of one function, without diminishing the activity with which other functions are performed. So long as society is let alone, its various structures will go on developing in due subordination to one another. If some of them are very imperfect, and make no appreciable progress towards efficiency, it is because still more important organs are equally imperfect, and because the growth of these involves cessation of

growth elsewhere. Be sure, also, that whenever there arises a special necessity for the better performance of any one function, or for the establishment of some new function, Nature will respond. Instance, in proof of this, the increase of particular manufacturing towns and seaports, or the formation of incorporated companies. Is there a rising demand for some commodity of general consumption ? Immediately the organ secreting that commodity becomes more active, absorbs more people, begins to enlarge, and secretes in greater abundance. To interfere with this process by producing premature development in any particular direction, is inevitably to disturb the due balance of organization, by causing somewhere else a corresponding atrophy. At any given time the amount of a society's vital force is fixed. Dependent as is that vital force on the extent to which men have acquired fitness for a co-operative life—upon the efficiency with which they can combine as elements of the social organism, we may be quite certain that, while their characters remain constant, nothing can increase its total quantity. We may be also certain that this total quantity can produce only its equivalent of results ; and that no legislators can get more from it, although by wasting it they may get less.

Already, in treating of Poor-Laws and National Education, we have examined in detail the reactions by which these attempts at a multiplication of results are defeated. In the case of sanitary administrations, a similar reaction may be traced ; showing itself, among other ways, in the checking of social improvements which demand popular enterprise.

Should proof of this be asked, it may be found in the contrast between English energy and Continental helplessness. English engineers (Manby, Wilson, and Co.) established the first gas-works in Paris, after the failure of a French company ; and many of the gas-works throughout Europe have been constructed by Englishmen. An English engineer

(Miller) introduced steam navigation on the Rhone; another English engineer (Pritchard) succeeded in ascending the Danube by steam, after the French and Germans had failed. The first steam-boats on the Loire were built by Englishmen (Fawcett and Preston); the great suspension bridge at Pesth has been built by an Englishman (Tierney Clarke); and an Englishman (Vignoles) is now building a still greater suspension bridge over the Dnieper. Many Continental railways have had Englishmen as consulting engineers; and in spite of the celebrated Mining College at Freyburg, several of the mineral fields along the Rhine have been opened up by English capital employing English skill. Now why is this? Why were our coaches so superior to the diligences and eilwagen of our neighbours? Why did our railway-system develop so much faster? Why are our towns better drained, better paved, and better supplied with water? There was originally no greater mechanical aptitude, and no greater desire to progress, in us than in the connate nations of Northern Europe. If anything, we were comparatively deficient in these respects. Early improvements in the arts of life were imported. The germs of our silk and woollen manufactures came from abroad. The first water-works in London were erected by a Dutchman. How happens it, then, that we have now reversed the relationship? Manifestly the change is due to difference of discipline. Having been left in a greater degree than others to manage their own affairs, the English people have become self-helping, and have acquired great practical ability. While, conversely, that comparative helplessness of the paternally-governed nations of Europe, illustrated in the above facts, and commented upon by Laing, in his *Notes of a Traveller*, and by other observers, is a natural result of the State-superintendence policy--is the reaction attendant on the action of official mechanisms--is the atrophy corresponding to some artificial hypertrophy.

One apparent difficulty accompanying the doctrine now contended for remains to be noticed. If sanitary administration by the State be wrong, because it implies a deduction from the citizen's property greater than is needful for maintaining his rights, then is sanitary administration by municipal authorities wrong also for the same reason. Be it by general government or by local government, the levying of compulsory rates for drainage and for paving and lighting, is inadmissible, as indirectly making legislative protection more costly than necessary, or, in other words, turning it into aggression (p. 67); and if so, it follows that neither the past, present, nor proposed methods of securing the health of towns are equitable.

This seems an awkward conclusion; nevertheless, as deducible from our general principle, we have no alternative but to accept it. How streets and courts are rightly to be kept in order remains to be considered. Respecting sewage there would be no difficulty. Houses might readily be drained on the same mercantile principle that they are now supplied with water. It is probable that in the hands of a private company, the resulting manure would not only pay the cost of collection, but would yield a considerable profit. But if not, the return on the invested capital would be made up by charges to those whose houses were drained: the alternative of having their connexions with the main sewer stopped, being as good a security for payment as the analogous ones possessed by water and gas companies.<sup>1</sup> Paving and lighting would properly fall to the management of house-owners. Were there no public provisions for such conveniences, house-owners would quickly find it their interest to furnish them.

<sup>1</sup> At the time this was written (1850) I was not aware that a conclusive illustration existed. Six years afterwards I learnt from the surveyor of Cheltenham (then Mr. H. Dangerfield) that before that town was incorporated there had been formed a company by which the place was drained; and this company paid 7 per cent. on its capital!

Some speculative building society having set the example of improvement in this direction, competition would do the rest. Dwellings without proper footways before them, and with no lamps to show the tenants to their doors, would stand empty, when better accommodation was offered. And good paving and lighting having thus become essential, landlords would combine for the more economical supply of them.<sup>1</sup>

<sup>1</sup> Only quite recently (in 1890) have I become aware of cases showing that, as above alleged, the lighting of towns might very well have been effected by voluntary agency in the absence of municipal administration. That the making and distribution of gas is practicable without the action of any local government is, indeed, a familiar fact; though had achievement of the committee been postponed until town-councils undertook it at the cost of the ratepayers, it would doubtless have been supposed that it could have been achieved in no other way. But there is proof that not only is private enterprise capable of supplying the inhabitants of towns with gas for indoor consumption, but that it is also capable of establishing and maintaining out-door lighting. In 1862, Pewsey, a small place in Wiltshire of not quite 2,000 people, established a gas company. Its chief business has been to supply private houses and shops, but it has also lighted the streets: being paid for doing this by the voluntary subscriptions of the chief inhabitants. Such difficulties as have arisen have been due to the fact that in so small a place the subscribers living far outside of it, who derive little benefit from the lighting, bear a large ratio to those living within the place: difficulties which would not arise in a town of any size. Though the company pays but 2 per cent., yet the smallness

To the objection that the perversity of individual landlords and the desire of some to take unfair advantage of the rest, would render such an arrangement impracticable, the reply is that in new suburban streets, not yet taken over by the authorities, such an arrangement is, to a considerable extent, already carried out, and would be much better carried out but for the consciousness that it is merely temporary. Moreover, no adverse inference could be drawn, were it even shown that for the present such an arrangement is impracticable. So, also, was personal freedom once. So once was representative government, and is still with many nations. As repeatedly pointed out, the practicability of recognizing men's rights is proportionate to the degree in which men have become moral. That an organization dictated by the law of equal freedom cannot yet be fully realized, is no proof of its imperfection: is proof only of *our* imperfection. And as, by diminishing this, the process of adaptation has already fitted us for institutions which were once too good for us, so will it go on to fit us for others that may be too good for us now.

of the dividend is obviously due to the large proportion which the cost of the plant and administration bears to the returns, where the business is so small.

## CURRENCY, POSTAL ARRANGEMENTS, ETC.

So constantly have currency and government been associated—so universal has been the control exercised by law-givers over monetary systems—so completely have men come to regard this control as a matter of course; that scarcely any one seems to inquire what

would result were it abolished. Perhaps in no case is the necessity of State-superintendence so generally assumed; and in no case will the denial of that necessity cause so much surprise.

That laws interfering with currency cannot be enacted without a reversal of

State-duty is obvious ; for either to forbid the issue, or enforce the receipt, of certain notes or coin in return for other things, is to infringe the right of exchange—is to prevent men making exchanges which they otherwise would have made, or is to oblige them to make exchanges which they otherwise would not have made. If there be truth in our general principle, it must be impolitic as well as wrong to do this. Nor will those who infer as much be deceived ; for it may be shown that such dictation is not only needless, but injurious.

The monetary arrangements of any community are ultimately dependent, like most of its other arrangements, on the morality of its members. Among a people altogether dishonest, every mercantile transaction must be effected in coin or goods ; for promises to pay cannot circulate at all, where, by the hypothesis, there is no probability that they will be redeemed. Conversely, among perfectly honest people paper alone will form the circulating medium ; seeing that as no one of such will give promises to pay more than his assets will cover, there can exist no hesitation to receive promises to pay in all cases ; and metallic money will be needless, save in nominal amount, to supply a measure of value. Manifestly therefore, during any intermediate state, in which men are neither altogether dishonest nor altogether honest, a mixed currency will exist ; and the ratio of paper to coin will vary with the degree of trust individuals can place in one another. There seems no evading this conclusion. The greater the prevalence of fraud, the greater will be the number of transactions in which the seller will part with his goods only for an equivalent of intrinsic value ; that is, the greater will be the number of transactions in which coin is required, and the more will the metallic currency preponderate. On the other hand, the more generally men find each other trustworthy, the more frequently will they take payment in notes, bills of exchange, and cheques ; the fewer will

be the cases in which gold and silver are called for, and the smaller will be the quantity of gold and silver in circulation.

Thus, self-regulating as is a currency when let alone, laws cannot improve its arrangements, although they may, and continually do, derange them. That the State should compel every one who has given promises to pay—be he merchant, private banker, or shareholder in a joint-stock bank—duly to discharge the responsibilities he has incurred, is very true. To do this, however, is merely to maintain men's rights—to administer justice, and therefore comes within the State's normal function. But to do more than this—to restrict issues, or forbid notes below a certain denomination, is no less injurious than inequitable. For limiting the paper in circulation to an amount smaller than it would otherwise reach, inevitably necessitates a corresponding increase of coin ; and as coin is locked-up capital, on which the nation gets no interest, a needless increase of it is equivalent to an additional tax equal to the additional interest lost.

Moreover, even under such restrictions, men must still depend mainly on one another's good faith and enlightened self-interest ; seeing that only by requiring the banker to keep sufficient specie in his coffers to cash all the notes he has issued, can *complete* security be given to the holders of them ; and to require as much is to destroy the motive for issuing notes. It should be remembered, too, that even now the greater part of our paper currency is wholly unguaranteed. Over the bills of exchange in circulation,<sup>1</sup> which represent liabilities three times as great as are represented by notes, no control is exercised. For the honouring of these there exists no special security, and the multiplication of them is without any limit, save that natural one above mentioned—the credit men find it safe to give one another.

<sup>1</sup> Though not literally currency, bills of exchange, serving in many cases to effect mercantile transactions which would otherwise be effected in money, to that extent perform its function.

Lastly, we have experience completely on the point. While in England banking has been perpetually controlled, now by privileging the Bank of England, now by limiting banking partnerships, now by prohibiting banks of issue within a specified circle, and now by restricting the amounts issued—while “we have never rested for many years together without some new laws, some new regulations, dictated by the fancy and theory fashionable at particular periods,”<sup>1</sup> and while “by constant interference we have prevented public opinion, and the experience of bankers themselves, adapting and moulding their business to the best and safest course”<sup>2</sup>—there has existed in Scotland for nearly two centuries a wholly uncontrolled system,—a complete free trade in currency. And what have been the comparative results? Scotland has had the advantage, both in security and economy. The gain in security is proved by the fact that the proportion of bank failures in Scotland has been far less than in England. Though “by law there has never been any restriction against any one issuing notes in Scotland; yet, in practice, it has ever been impossible for any unsound or unsafe paper to obtain currency.”<sup>3</sup> And thus the natural guarantee in the one case has been more efficient than the legislative one in the other. The gain in economy is proved by the fact that Scotland has carried on its business with a circulation of £3,500,000, while in England the circulation is from £50,000,000 to £60,000,000; or, allowing for difference of population, England has required a currency three times greater than Scotland.

When, therefore, we find *a priori* reason for concluding that in any given community the due balance between paper and coin will be spontaneously maintained—when we also find that three-fourths of our own paper circulation is

self-regulated, and that the restrictions on the other fourth entail a useless sinking of capital—when we find, further, that facts prove a self-regulated system to be both safer and cheaper, we may fairly say, as above, that legislative interference is not only needless, but injurious.

If evil arises when the State takes upon itself to regulate currency, so also does evil arise when it turns banker. True, no direct breach of duty is committed in issuing notes; for the mere transfer of promises to pay to those who will take them, necessitates neither infringement of men’s rights nor the raising of taxes for illegitimate purposes. Did the State confine itself to this, no harm would result; but when, as in practice, it makes its notes, or, rather, those of its proxy, legal tender, it both violates the law of equal freedom and opens the door to abuses that were else impossible. Having enacted that its agent’s promises to pay shall be taken in discharge of all claims between man and man, there readily follows, when occasion calls, the further step of enacting that these promises to pay shall be taken in discharge of all claims on its agent. This done, further liabilities are incurred without difficulty, for they can be liquidated in paper. Paper continues to be issued without limit, and then comes depreciation; which depreciation is virtually an additional taxation, imposed without the popular consent—a taxation which, if directly imposed, would make men realize the extravagance of their national expenditure, and condemn the war necessitating it. Seeing then, that there could never occur depreciation, and its concomitant evils, were there no notes made inconvertible by Act of Parliament; and seeing that there could never exist any motive to make notes legally inconvertible save for purposes of State-banking; there is good reason to consider State-banking injurious. Should it be urged that, for the occasional evils it entails, State-banking more than compensates by the habitual supply of many

<sup>1</sup> *Capital, Currency, and Banking.* By James Wilson, Esq., M.P.

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*

millions' worth of notes, whose place could not be supplied by other notes of equal credit, it is replied that had the Bank of England no alliance with the State,<sup>1</sup> its notes would still circulate as extensively as now, provided its proprietors continued their solicitude (so constantly shown at the half-yearly meetings) to keep their assets more than three millions above their liabilities.

There is a third capacity in which a Government usually stands related to the currency, namely, as a manufacturer of coins. That in theory a Government may carry on the trade of stamping bullion without necessarily reversing its proper function is admitted. Practically, however, it never does so without collaterally transgressing. For the same causes which prevent it from profitably competing with private individuals in other trades, must prevent it from profitably competing with them in this—a truth which inquiry into the management of the Mint will sufficiently enforce. And if so, a Government can manufacture coins without loss only by forbidding every one else to manufacture them. By doing this, however, it diminishes men's liberty of action in the same way as by any other trade restriction—in short, does wrong. And, ultimately, the breach of the law of equal freedom thus committed results in society having to pay more for its metallic currency than would otherwise be necessary.

Perhaps to most it will seem that by a national mint alone can the extensive diffusion of spurious coinage be prevented. But those who suppose this, forget that under a natural system there would exist the same safeguards against such an evil as at present. The ease with which bad money is distinguished from good, is the ultimate guarantee for genuineness; and this guarantee would be as efficient then

<sup>1</sup> The alliance consists in this, that on the credit of a standing debt of £14,000,000, due from the Government to the Bank, the Bank is allowed to issue notes to that amount (besides further notes on other security), and hence to the extent of this debt the notes have practically a Government guarantee.

as now. Moreover, whatever additional security arises from the punishment of "smashers," would still be afforded; seeing that to bring to justice those who, by paying in base coin, obtain goods "under false pretences," comes within the State's duty. Should it be urged that, in the absence of legislative regulations, there would be nothing to prevent makers from issuing new mintages of various denominations and degrees of fineness, the reply is that only when some obvious public advantage was to be obtained by it, could a coin differing from current ones get into circulation. Were private mints now permitted, the proprietors of them would be obliged to make their sovereigns like existing ones, because no others would be taken. For the size and weight—they would be tested by gauge and balance, as now (and for a while with great caution). For the fineness—it would be guaranteed by the scrutiny of other makers. Competing firms would assay each other's issues whenever there appeared the least reason to think them below the established standard, and should their suspicions prove correct, would quickly find some mode of diffusing the information. Probably a single case of exposure and the consequent ruin, would ever after prevent attempts to circulate coins of inferior fineness.

It is not unlikely that many readers, though unprepared with definite replies to these reasonings, will still doubt their correctness. That the existing monetary system—an actual working system, seemingly kept going by the State—would be benefited by the withdrawal of State-control, is a belief which the strongest arguments will in most cases fail to instil. Custom will bias men in this case, much as in another case it does the vine-growers of France, who, having long been instructed by State-commissioned authorities when to commence the vintage, believe that such dictation is beneficial. So much more does a realized fact influence us than an imagined one, that had the baking and sale of

bread been hitherto carried on by Government-agents, probably the supply of bread by private enterprise would scarcely be conceived possible, much less advantageous. The philosophical free-trader, however, remembering this effect of habit over the convictions—remembering how innumerable have been the instances in which legislative control was erroneously thought necessary—remembering that in this very matter of currency men once considered it requisite “to use the most ferocious measures to bring as much foreign bullion as possible into the country, and to prevent any going out”—remembering how *that* interference, like others, proved not only needless but injurious—remembering all this, the philosophical free-trader will infer that in the present instance also, legislative control is undesirable. Reasons for considering trade in money an exception to the general rule, will weigh but little with him; for he will recollect that similar reasons have been assigned for restricting various trades, and have been disproved by the results. Rather will he conclude that as, in spite of all prophecies and appearances to the contrary, entire freedom of exchange has been beneficial in other cases, so, despite similar prophecies and adverse appearances, will it be beneficial in this case.<sup>1</sup>

<sup>1</sup> The conclusion drawn in the above section has been contested by Prof. W. Stanley Jevons in his work on *Money and the Mechanism of Exchange*. He argues that in this case the judgment of the consumer cannot be trusted to maintain the quality, because the consumer does not take the money to keep it, but to pass it on, and hence has no interest in any greater goodness of it than will enable him to pass it on. He enunciates what has been called Gresham's law, “that *bad money drives out good money*, but that *good money cannot drive out bad money*.” But this ignores the fact that after a certain point depreciation of value from wear (which is the cause he assigns for debasement) hinders the circulation of the debased money; for, as from time to time, banks deduct discount on receiving much-worn coins, and as traders, knowing this, often refuse much-worn coins, there arises a resistance to the circulation of the inferior coinage, and it becomes unable, as alleged, to

What was lately said respecting the stamping of bullion may here be repeated respecting the carrying of letters, that it is not intrinsically at variance with State-duty; for it does not in the abstract necessitate any infringement of men's rights, either directly, or by taxes raised for non-protective purposes. Nevertheless, just as we found reason to think that Government could not continue to manufacture coin unless by preventing private individuals from doing the same, so shall we find reason to think that it would cease to carry letters did it not forbid competition. And if this is implied, a Government cannot undertake postal functions without reversing its essential function.

Evidence that private enterprise *would* supersede State agency in this matter, were it allowed the opportunity, is deducible not only from our general experience of the inferiority of Government in the capacity of manufacturer, trader, or manager of business, but from facts immediately bearing on the question. Thus we must remember that the efficiency to which our postal system has actually attained is not due to its being under public administration, but is due to pressure from without. Changes have been forced on the authorities, not introduced by them. The mail-coach system was established, and for a length of time managed by a private individual, and lived down official opposition. The

drive out the good. Not having myself much studied this question, however, I rely chiefly on an authority certainly not lower than Prof. Jevons, namely, the late Mr. Walter Bagehot, who as banker, editor of the *Economist*, and writer on financial matters, was a judge specially competent. Shortly before his death, I named to him Prof. Jevons' argument. He dissented from it and agreed with me. He did more. He expressed the opinion that had there existed no interdicts on coining by private persons, the house of Rothschild would long before this have established an universal coinage! If he was right in this belief, how enormous has been the injury inflicted on mankind by State-interdicts on coining. What an immense amount of labour and loss would have been saved had things been allowed to take their natural course!

reform originated by Mr. Rowland Hill was strenuously resisted; and it is generally reported that even now, official perversity prevents his plans from being fully carried out. Whereas, seeing that the speculative spirit of trade is not only ready, but eager, to satisfy social wants, it is probable that under a natural state of things modern postal improvements would have been willingly adopted, if not forestalled. Should it be alleged that private enterprise would not be competent to so gigantic an undertaking, it is replied that already there are extensive organizations of analogous character which work well. The establishments of our large carriers ramify throughout the kingdom; and we have a Parcels Delivery Company co-extensive in its sphere with the London District Post, and quite as efficient. Private agencies for communicating information beat public ones even now, wherever they are permitted to compete with them. The foreign expresses of our daily papers are uniformly before the Government expresses. Copies of a royal speech, or statements of an important vote, are diffused throughout the country by the press, with a rapidity exceeding that ever achieved by the Post Office; and if expedition is shown in the stamping and sorting of letters, it is far surpassed by the expedition of parliamentary reporting. Moreover, much of the postal service itself is already performed by the private agency of railway companies and steamboat companies. Not only are our internal mails carried by contract, but nearly all our external ones also; and where they are carried by Government they are carried at a great loss. In proof of which assertion it needs but to quote the fact that the Peninsular and Oriental Steam Navigation Company offers to secure for us a direct monthly communication with Australia; two communications monthly from Southampton to Alexandria; two communications monthly from Suez to Ceylon, Singapore, and China; and two communications monthly from Calcutta to

Singapore and China; besides performing the service twice a month between Suez and Bombay; and all for the same sum of money which the latter service alone (Suez to Bombay) now costs the Governments of India and Great Britain!

If, then, public letter-carrying has been brought to its existing efficiency by the thought, enterprise, and urgency of private persons, in spite of official resistance—if organizations similar to our postal ones already exist and work well—if, as conveyers of intelligence by other modes than the mail, trading bodies uniformly excel the State—if much of the mail service itself is performed by such trading bodies, and that, too, on the largest scale, with incomparably greater economy than the State can perform it with; there is nothing unreasonable in the conclusion that, were it permitted, commercial enterprise would generate a letter-carrying system as efficient as, if not more efficient than, our present one. It is true that many obstacles stand in the way of such a result. But because it is now scarcely possible to see our way over these, it does not follow that they may not be surmounted. There are moral inventions as well as physical ones. And it frequently happens that the instrumentalities which ultimately accomplish certain social desiderata, are as little foreseen as are the mechanical appliances of one generation by the previous one. Take the Railway Clearing-House for an example. Hence it is not too much to expect that under the pressure of social necessity, and the stimulus of self-interest, satisfactory modes of meeting all such difficulties would be discovered.

However, any doubts which may still be entertained on the point do not militate against our general principle. It is clear that the restriction put upon the liberty of trade, by forbidding private letter-carrying establishments, is a breach of State-duty. It is also clear that were that restriction abolished, a natural postal system would eventually grow up, could

t surpass in efficiency our existing one. And it is further clear that if it could not surpass it, the existing system might rightly continue; for, as at first said, the fulfilment of postal functions by the State is not *intrinsically* at variance with the fulfilment of its essential function.

The execution by Government of what are commonly called public works, as lighthouses, harbours of refuge, &c., implying, as it does, the imposition of taxes for other purposes than maintaining men's rights against foreign and domestic foes, is as much forbidden by our definition of State-duty as is a system of national education, or a religious establishment. Nor is this unavoidable inference really an inconvenient one; however much it may at first seem so. The agency by which these minor wants of society are now satisfied, is not the only agency competent to satisfy them. Wherever there exists a want, there will also exist an impulse to get it fulfilled; and this impulse is sure, eventually, to produce action. In the present case, as in others, that which is beneficial to the community as a whole, it will become the private interest of some part of the community to accomplish. And as this private interest has been so

efficient a provider of roads, canals, and railways, there is no reason why it should not be an equally efficient provider of harbours of refuge, lighthouses, and all analogous appliances. Even were there no classes whose private interests would be obviously suberved by executing such works, this inference might still be defended. But there are such classes. Ship-owners and merchants have a direct and ever-waking motive to diminish the dangers of navigation; and were they not taught by custom to look for State-aid, would themselves quickly unite to establish safeguards. Or, possibly, they would be anticipated by a combination of Marine Insurance Offices (themselves protective institutions originated by self-interest). But, inevitably, in some way or other, the numerosness of the parties concerned and the largeness of the capital at stake, would guarantee the taking of all requisite precautions. That enterprise which built the docks of London, Liverpool, and Birkenhead—which is enclosing the Wash—which so lately bridged the Atlantic by steam—and which is now laying down the electric telegraph across the Channel—might safely be trusted to provide against the contingencies of coast-navigation.

## GENERAL CONSIDERATIONS

SOCIAL philosophy may be aptly divided (as political economy has been) into statics and dynamics; the first treating of the equilibrium of a perfect society, the second of the forces by which society is advanced towards perfection.<sup>1</sup> To determine what laws we

must obey for the obtainment of complete happiness is the object of the one; while that of the other is to analyze the influences which are making us compe-

some one—a political economist I supposed. In the above sentence I assumed that I was giving the division a wider application; whereas it appears that I was simply giving to it the original application made by M. Comte. But at that time Comte was to me only a name.

<sup>1</sup> I had seen this division of Political Economy in the work of Mr. J. S. Mill, where he refers to it as having been made by

tent to obey these laws. Hitherto we have concerned ourselves chiefly with the statics, touching on the dynamics only occasionally for purposes of elucidation. Now, however, the dynamics claim special attention. Some of the phenomena of progress already referred to need further explanation, and many others associated with them remain to be noticed. There are also sundry general considerations not admissible into foregoing chapters, which may here be fitly included.

And first let us mark that the course of civilization could not have been other than it has been. Given an unsubdued Earth ; given the being—Man, fitted to overspread and occupy it ; given the laws of life what they are ; and no other series of changes than that which has taken place, could have taken place.

Each member of a race fulfilling the conditions to greatest happiness, must be so constituted that he may obtain full satisfaction for every desire without diminishing the power of others to obtain like satisfactions : nay, must derive pleasure from seeing pleasure in others. Now, for such beings to multiply in a world tenanted by inferior creatures—creatures which must be dispossessed to make room—is a manifest impossibility. By the definition, such beings would lack all desire to exterminate the races they are to supplant. They would, indeed, have a repugnance to exterminating them ; for the ability to derive pleasure from seeing pleasure, involves the liability to derive pain from seeing pain. Evidently, therefore, these hypothetical beings, instead of subjugating and overspreading the Earth, would themselves become the prey of pre-existing creatures, in which destructive desires predominated. Hence the aboriginal man must have a character fitting him to clear it of races endangering his life, and races occupying the space required by mankind. He must have a desire to kill ; for it is the law of animal life that to every needful act

must attach a gratification, the desire for which may serve as a stimulus. In other words, he must be what we call a savage ; and must be left to acquire fitness for social life as fast as the conquest of the Earth renders social life possible.

Whoever thinks that men might have full sympathy with their fellows, while lacking all sympathy with inferior creatures, will discover his error on looking at the facts. The Indian whose life is spent in the chase, delights in torturing his brother man as much as in killing game. His sons are schooled into fortitude by long days of torment, and his squaw made prematurely old by hard treatment. Among partially-civilized nations the two characteristics have ever borne the same relationship. Thus the spectators in the Roman amphitheatres were as much delighted by the slaying of gladiators as by the death struggles of wild beasts. The ages during which Europe was thinly peopled, and hunting a chief occupation, were also the ages of feudal violence, universal brigandage, dungeons, tortures. Here in England a whole province depopulated to make a game preserve, and a law sentencing to death the serf who killed a stag, show that great activity of the predatory instinct and utter indifference to human happiness co-existed. In later days, when bull-baiting and cock-fighting were common pastimes, the penal code was far more severe than now ; prisons were full of horrors ; men put in the pillory were maltreated by the populace ; and the inmates of lunatic asylums, chained naked to the wall, were exhibited for money, and tormented for the amusement of visitors. Conversely, among ourselves a desire to diminish human misery is accompanied by a desire to ameliorate the condition of inferior creatures. While the kindlier feeling of men is seen in all varieties of philanthropic effort—in charitable societies, in associations for improving the dwellings of the labouring classes, in anxiety for popular education, in attempts to abolish capital

punishment, in zeal for temperance reform, in ragged schools, in endeavours to protect climbing boys, in inquiries concerning "labour and the poor," in emigration funds, in the milder treatment of children, and so on—it also shows itself in societies for the prevention of cruelty to animals, in Acts of Parliament to put down the use of dogs for purposes of draught, in the condemnation of *battues*, in the late inquiry why the pursuers of a stag should not be punished as much as the carter who maltreats his horse, and lastly, in vegetarianism. Moreover, to make the evidence complete, we have the fact that men partially adapted to the social state, retrograde on being placed in circumstances which call forth the old propensities. The barbarizing of colonists, who live under aboriginal conditions, is universally remarked. The back settlers of America, among whom unpunished murders, rifle duels, and Lynch law prevail—or, better still, the trappers, who leading a savage life have descended to savage habits, to scalping, and occasionally even to cannibalism—sufficiently exemplify it.

The same impulses govern in either case. The desire to inflict suffering distinguishes not between the creatures who exhibit that suffering, but obtains gratification indifferently from the agonies of beast and human being. Contrariwise, the sympathy which prevents its possessor from inflicting pain that he may avoid pain himself, and which tempts him to give happiness that he may have happiness reflected back upon him, is similarly undistinguishing. It reproduces in one being the emotions exhibited by other beings; and it extracts pleasure from the friskiness of a just-unchained dog, or excites pity for an ill-used beast of burden, as readily as it generates fellow feeling with the joys and sorrows of men.

Thus it is necessary that the primitive man should be one whose happiness is obtained regardless of the expense to other beings. "It is necessary that the ultimate man should be one who can

obtain happiness without deducting from the happiness of others. The first of these constitutions has to be moulded into the last. And the manifold evils which have filled the world for these thousands of years—the murders, enslavements, and robberies—the tyrannies of rulers, the oppressions of class, the persecutions of sect and party, the multiform embodiments of selfishness in unjust laws, barbarous customs, dishonest dealings, exclusive manners, and the like—simply illustrate the disastrous working of this original and once useful constitution, now that mankind has grown into conditions for which it is not fitted—are nothing but symptoms of the suffering attendant on the process of adapting humanity to its new circumstances.

But why, it may be asked, has the adaptation gone on so slowly?

The answer is, that the new conditions to which adaptation has been taking place have themselves grown up but slowly. The warfare between man and the creatures at enmity with him has continued down to the present time, and over a large portion of the globe is going on now. Where the destructive propensities are on the eve of losing their gratification, they make to themselves artificial spheres of exercise by game-preserving, fox-hunting, cock-fights, bull-fights, bear-baiting; and are so kept in activity. But note, chiefly, that the old predatory disposition is in a certain sense self-maintained. For it generates between men and men hostile relationships similar to those which it generates between men and inferior animals; and by doing so provides itself a lasting source of excitement. This happens inevitably. The desires of the savage acting, as we have seen, indiscriminately, necessarily lead to quarrels of individuals, to fightings of tribes, to feuds of clan with clan, to wars of nations.

Hitherto, then, human character has changed but slowly, because it has been subject to two conflicting sets of condi-

tions. On the one hand, the discipline of the social state has been developing it into the sympathetic form ; while on the other hand, the necessity for self-defence partly of man against brute, partly of man against man, and partly of societies against one another, has been maintaining the old unsympathetic form. And only where the influence of the first set of conditions has exceeded that of the last, and then only in proportion to the excess, has modification taken place.

Regarded thus, civilization is a development of man's latent capabilities under favourable circumstances ; which favourable circumstances, mark, were certain some time or other to occur. Those complex influences underlying the higher orders of natural phenomena, but more especially those underlying the organic world, work in subordination to the law of probabilities. A plant, for instance, produces thousands of seeds. The greater part of these are destroyed by creatures which live upon them, or fall into places where they cannot germinate. Of the young plants produced by those which do germinate, many are smothered by their neighbours ; others are blighted by insects, or eaten up by animals ; and, *in the average of cases*, only one of them produces a perfect specimen of its species which, escaping all dangers, brings to maturity seeds enough to continue the race. Thus it is also with every kind of creature. Thus it is also, as M. Quetelet has shown, with the phenomena of human life. Thus was it even with the germination and growth of societies. The seeds of civilization existing in the aboriginal man, and distributed over the Earth by his multiplication, were certain in the lapse of time to fall here and there into circumstances fit for their development ; and, in spite of all blightings and uprootings, were certain, by sufficient repetition of these occurrences, ultimately to originate a civilization which should outlive all disasters.

The forces at work exterminate such

sections of mankind as stand in the way, with the same sternness that they exterminate beasts of prey and herds of useless ruminants. Just as the savage has taken the place of lower creatures, so must he, if he have remained too long a savage, give place to his superior. And, observe, it is necessarily to his superior that, in the majority of cases, he does give place. For what are the pre-requisites to a conquering race? Numerical strength, or more powerful nature, or an improved system of warfare ; all of them indications of advancement. Numerical strength implies certain civilizing antecedents. Deficiency of game may have necessitated agricultural pursuits, and so made the existence of a larger population possible ; or distance from other tribes may have rendered war less frequent, and so have prevented its perpetual decimations ; or accidental superiority over neighbouring tribes, may have led to the final subjugation and enslaving of these : in any of which cases, the comparatively peaceful condition resulting must have allowed progress to commence. Evidently, therefore, the conquest of one people over another has been, in the main, the conquest of the social man over the anti-social man ; or, strictly speaking, of the more adapted over the less adapted.

In another mode, too, the continuance of the unsympathetic character has indirectly aided civilization while it has directly hindered it ; namely, by giving rise to slavery. It has been truly observed that only by such stringent coercion as is exercised over men held in bondage, could the needful power of continuous application have been developed. Devoid of this, as from his habits of life the aboriginal man necessarily was (and as, indeed, existing specimens show), probably the severest discipline continued for many generations, was required to make him submit contentedly to the necessities of his new state. And if so, the barbarous selfishness which maintained that discipline must be considered as having worked a

collateral benefit, though in itself so radically bad.

Let not the reader be alarmed. Let him not fear that these admissions will excuse new invasions and new oppressions. Nor let any one who fancies himself called upon to take Nature's part in this matter, by providing discipline for idle negroes or others, suppose that these dealings of the past will serve for precedents. Rightly understood, they will do no such thing. That phase of civilization during which forcible supplantings of the weak by the strong, and systems of savage coercion, are on the whole advantageous, is a phase which spontaneously and necessarily gives birth to these things. It is not in pursuance of any calmly-reasoned conclusions respecting Nature's intention that men conquer and enslave their fellows—it is not that they smother their kindly feelings to subserve civilization; but it is that, as yet constituted, they care little what suffering they inflict in the pursuit of gratification, and even think the achievement and exercise of mastery honourable. As soon, however, as there arises a perception that these subjugations and tyrannies are not right—as soon as the sentiment to which they are repugnant becomes sufficiently powerful to suppress them, it is time for them to cease. The question altogether depends on the amount of moral feeling possessed by men, or, in other words, on the degree of adaptation to the social state they have undergone. Unconsciousness that there is anything wrong in exterminating inferior races, or in reducing them to bondage, presupposes an almost rudimentary state of men's sympathies and their sense of human rights. The oppressions they then inflict and submit to, are not, therefore, detrimental to their characters—do not retard in them the growth of social sentiments; for these have not yet reached a development great enough to be offended by such doings. And hence the aids given to civilization—by clearing the Earth of its least advanced inhabitants, and by

forcibly compelling the rest to acquire industrial habits, are given without moral adaptation receiving any corresponding check. Quite otherwise it is, however, when the flagitiousness of these gross forms of injustice begins to be recognized. Then the times give proof that the old *régime* is no longer fit. Further progress cannot be made until the newly-felt wrong has been done away or diminished. Were it possible under such circumstances to uphold past institutions and practices, it would be at the expense of a continual searing of men's consciences. Before a forced servitude could be again established for the industrial discipline of eight hundred thousand Jamaica blacks, the thirty millions of English whites who established it would have to retrograde in all things—in truthfulness, fidelity, generosity, honesty, and even in material condition; for to diminish men's moral sense is to diminish their fitness for acting together, and, therefore, to render the best producing and distributing organizations impracticable. Another illustration, this, of the economy of Nature. While the injustice of conquests and enslavements is not perceived, they are on the whole beneficial; but as soon as they are felt to be at variance with the moral law, the continuance of them retards adaptation in one direction more than it advances in another: a fact which our new preacher of the old doctrine that might is right, may profitably consider a little.

Contrasted as are their units, primitive communities and advanced ones must essentially differ in the principles of their structure. Like other organisms, the social organism has to pass in the course of its development through temporary forms, in which sundry of its functions are fulfilled by appliances destined to disappear as fast as the ultimate appliances become efficient. Associated humanity has larval appendages analogous to those of individual creatures.

But deciduous institutions imply decid-

uous sentiments. Dependent as they are upon popular character, established political systems cannot die out until the feeling which upholds them dies out. Hence, during man's apprenticeship to the social state, there must predominate in him some impulse corresponding to the arrangements requisite; which impulse diminishes as the probationary organization made possible by it, merges into the ultimate organization. The nature and operation of this impulse now demand our attention.

"I had so great a respect for the memory of Henry IV," said the celebrated French robber and assassin, Cartouche, "that had a victim I was pursuing taken refuge under his statue on the Pont Neuf, I would have spared his life." An apt illustration, this, of the co-existence of profound hero-worship with the extremest savageness, and of the means hero-worship affords whereby the savage may be ruled. For the anti-social man to be transformed into the social man, he must live in the social state. But how can a society be maintained when, by the hypothesis, the aggressive desires of its members are destructive of it? Evidently its members must possess some counterbalancing tendency which shall keep them in the social state despite the incongruity, and which shall diminish as adaptation to the new circumstances renders restraint less needful. Such counterbalancing tendency we have in this sentiment which leads men to prostrate themselves before any manifestation of power, be it in chief, feudal lord, king, or constitutional government.

Facts illustrate this alleged connexion between strength of hero-worship and strength of the aggressive propensities, and other facts illustrate the simultaneous decline of both.

In some of the Pacific isles, where the immolation of children to idols, and the burying of parents alive, are common, "so high is the reverence for hereditary chieftainship that it is often connected

with the idea of Divine power." In Fiji complete absolutism co-exists with rampant cannibalism. We read of human hecatombs in connexion with the extremest prostration of subjects to rulers, as in Dahomy. There is autocratic government, too, for the blood-thirsty Mongolian races. Both positive and negative proof of this association is given by Mr. Grote, where he says, "In no city of historical Greece did there prevail either human sacrifices or deliberate mutilations, such as cutting off the nose, ears, hands, feet, &c., or castration, or selling of children into slavery, or polygamy, or the feeling of unlimited obedience towards one man: all of them customs which might be pointed out as existing amongst the contemporary Carthaginians, Egyptians, Persians, Thracians," &c. If we consult mediæval history, there, along with loyalty strongly manifested, are the right of private war, constant wearing of arms, religious martyrdoms and massacres, &c., to prove that life was held in less respect than now. And we see that in recent times among ourselves, diminished reverence for authority has occurred simultaneously with diminished sanguinaries in our criminal code.

That infringements of personal liberty are greatest where awe of power is greatest, is in some sort a truism; seeing that forced servitude, through which alone extensive violation of human liberty can be made, is impossible unless the sentiment of power-worship is strong. Thus, the ancient Persians could never have allowed themselves to be considered the private property of their monarchs, had it not been for the overwhelming influence of this sentiment. But that such submission is associated with a defect of moral sense, is best seen in the acknowledged truth that readiness to cringe is accompanied by an equal readiness to tyrannize. Satraps lorded it over the people as their king over them. The Helots were not more coerced by their Spartan masters than these in turn by their oligarchy. Of the servile Hindoos

the sacredness of life, of liberty, and of property, is least displayed.

The fact that, during civilization, awe of authority and regard for equity vary inversely, is simply the obverse of the fact already hinted, that society is possible so long only as they continue to do this. Evidently, if men are to live together, the absence of internal power to rule themselves rightly towards each other necessitates the presence of external power to enforce such behaviour as may make association tolerable; and this power can become operative only if reverenced. So that wild races deficient in the allegiance-producing sentiment cannot enter into a civilized state at all, but have to be supplanted by others which can. And it must further follow that if in any community loyalty diminishes at a greater rate than equity increases, there will arise a tendency towards social dissolution—a tendency which the populace of Paris threaten to illustrate.<sup>1</sup>

How needful the continuance of a savage selfishness renders the continuance of a proportionate amount of power-worship may be perceived daily. Examine into trade practices; read over business correspondence; or get a solicitor to detail his conversations with clients, you will find that in most cases conduct depends, not upon what is right, but upon what is legal. Provided they "keep o' the windy side of the law," the great majority are but little restrained by regard for strict rectitude. The question with your everyday man of the world is, not—May the claimant justly require thus much of me? but rather—"Is it so nominated in the bond?" If "an action will lie," such an one will commonly enough take proceedings to obtain what he knows himself not equitably entitled to; and if "the law allows it and the court awards it," will pocket all he can get without scruple. When we find doings like these regarded as matters of course,

<sup>1</sup> And which they have since illustrated.

and those guilty of them passing for respectable men—when we thus find that so many will deal fairly by their fellows only on compulsion—we discover how requisite is the sentiment from which the compelling instrumentality derives its force.

Without doubt this sentiment has begotten many gigantic evils, some of which it still nurtures. The various superstitions that have prevailed, and that still prevail, as to the great things legislatures can do, and the disastrous meddlings growing out of these superstitions, are due to it. The veneration which produces submission to a Government unavoidably invests that Government with proportionately high attributes; for being in essence a worship of power, it can be strongly drawn out towards that only which either has great power, or is believed to have it. Hence the old delusions that rulers can fix the value of money, the rate of wages, and the price of food. Hence the still current fallacies about preventing distress, easing monetary pressures, and curing over-population by law. Hence, also, the monstrous, though generally-received doctrine, that a legislature may equitably take people's property to such extent, and for such purposes, as it thinks fit. Yet, in spite of all this—in spite of the false theories and mischievous interferences, the numberless oppressions and miseries, in one way or other traceable to it—we must admit that this power worship has fulfilled, and still fulfils, a very important function, and that it may advantageously last as long as it can.

That it cannot last longer than needful may be readily proved. The very feeling, during whose minority it exercises regency over men, becomes the destroyer of its authority. Between the temporary ruler and the ultimate rightful one, there is an unceasing conflict, in which the wane of influence on the one side is necessitated by its growth on the other.

For, as already shown, the sense of

rights, by whose sympathetic excitement men are led to behave justly towards one another, is the same sense of rights by which they are prompted to assert their own claims—their own freedom to exercise their faculties—and to resist every encroachment. This impulse brooks no restraint, save that imposed by fellow feeling; and disputes all assumption of extra privilege, by whomsoever made. Consequently, it is in perpetual antagonism with a sentiment which delights in subserviency. "Reverence this authority," suggests power-worship. "Why should I? who set it over me?" demands instinct of freedom. "I will do what your Highness bids," says the one with bated breath. "Pray, sir," shouts the other, "who are you, that you should dictate to me?" "This man is divinely appointed to rule over us, and we ought therefore to submit," argues the one. "I tell you, no," replies the other: "we have divinely-endorsed claims to freedom, and it is our duty to maintain them." And thus the controversy goes on: conduct during each phase of civilization being determined by the relative strengths of the two feelings. While yet too feeble to be operative as a social restraint, moral sense, by its scarcely-heard protest, does not hinder a predominant hero-worship from giving possibility to the most stringent despotism. Gradually, as it grows strong enough to deter men from the grosser trespasses on one another, it also grows strong enough to struggle successfully against that coercion which is no longer required.

Of course the institutions of any given age exhibit the compromise made by these contending sentiments at the signing of their last truce. Between the state of unlimited government arising from supremacy of the one feeling, and the state of no government arising from supremacy of the other, lie intermediate forms of political organization, beginning with "despotism tempered by assassination," and ending with that highest development of the representa-

tive system, under which the right of constituents to instruct their delegates is fully admitted: a system which, by making the nation at large a deliberative body, and reducing the legislative assembly to an executive, carries self-government to the fullest extent compatible with the existence of a ruling power. Of necessity the mixed constitutions which characterize this transition period, are in the abstract absurd. The two feelings, answering to the popular and monarchical elements, being antagonistic, give utterance to antagonistic ideas. And to suppose that these can be consistently united, is to suppose that *yes* and *no* can be reconciled. The monarchical theory is, that the people are in duty bound to submit themselves with all humility to a certain individual—ought to subordinate their wills to his will. Contrariwise, the democratic theory—either as specifically defined, or as embodied in our own constitution under the form of a power to withhold supplies, and in the legal fiction that the citizen assents to the laws he has to obey—is, that the people ought *not* to be subject to the will of one, but should fulfil their own wills. Now these are flat contradictions. If a king may rightfully claim obedience, then should that obedience be entire; else there starts up the unanswerable question—why must we obey in this and not in that? But if men may rightfully rule themselves, then should they rule themselves altogether. Otherwise it may be asked—why are they their own masters in such and such cases, and not in the rest?

Nevertheless, though these mixed governments, combining as they do two mutually destructive hypotheses, are utterly irrational in principle, they must of necessity exist, so long as they are in harmony with the mixed constitution of the partially-adapted man. And it seems that the radical incongruity pervading them cannot be recognized by men, while there exists a corresponding incongruity in their own natures: a good illustration of the law that opinion is

ultimately determined by the feelings, and not by the intellect.

How completely, indeed, conceptions of right and wrong in these matters, depend on the balance of impulses existing in men, may be worth considering a moment. And first, observe that no tracing out of actions to their final good or bad consequences, is, by itself, capable of generating approbation or reprobation of those actions. Could it do this, men's moral codes would be high or low, according as they made these analyses well or ill, that is—according to their intellectual acuteness. Whence it would follow that, in all ages and nations, men of equal intelligence should have like ethical theories, while contemporaries should have unlike ones, if their reflective powers are unlike. But facts do not answer to these inferences. On the contrary, they point to the law above specified. Both history and daily experience prove to us that men's ideas of rectitude, correspond to the sentiments and instincts predominating in them. We constantly read of despots defending their claims to unlimited sway as being divinely authorized. The *rights* of rival princes were of old asserted by their respective partisans, and are still asserted by modern legitimists, with a warmth like that with which an ardent democrat asserts the rights of man. To those living in feudal times, so unquestionable seemed the duty of serfs to obey their lords, that Luther (no doubt acting conscientiously) urged the barons to vengeance on the rebellious peasants; calling on all who could "to stab them, cut them down, and dash their brains out, as if they were mad dogs." Moreover, we shall find that deficiency of the appropriate sentiment disables the mind from realizing the title of the human being to freedom. Thus, Plato could conceive of nothing better for his ideal republic than a system of class despotism; and, indeed, up to his time, and long after it, there seems to have existed no man who saw anything wrong

in slavery. It is narrated of Colonel D'Oyley, the first governor of Jamaica, that within a few days after having issued an order "for the distribution to the army of 1,701 Bibles," he signed another order for the "payment of the summe of twenty pounds sterlinc, out of the impost money, to pay for fifteen doggs, brought by John Hoy, for the hunting of the negroes." The holding of slaves by ministers of religion in America is a parallel fact. Dr. Moberly, of Winchester College, has written a book to defend flogging; which he says, as a system of school-government, gives "more security of essential deep seated goodness than any other which can be devised." Again, in a recent pamphlet, signed "A Country Parson," it is maintained that "you must convert the Chartist spirit as you would reform the drunkard's spirit, by showing that it is a rebellion against the laws of God. But the strangest peculiarity exhibited by those deficient in the sense of rights—or rather that which looks the strangest to us—is their inability to recognize their own claims. We are told, for instance, by Lieutenant Bernard,<sup>1</sup> that in the Portuguese settlements on the African coast, the free negroes are "taunted by the slaves as having no white man to look after them, and see them righted when oppressed"; and it is said that in America the slaves themselves look down upon the free blacks, and call them rubbish.

To account, by any current hypothesis, for the numberless disagreements in men's ideas of right and wrong here briefly exemplified, seems scarcely possible. But on the theory that opinion is a resultant of moral forces, whose equilibrium varies with every race and epoch—that is, with every phase of adaptation—the rational is evident. Nor indeed, considering the matter closely, does it appear that society could ever hold together were not opinion thus dependent on the balance of feelings.

<sup>1</sup> *Three Years' Cruise in the Mediterranean*.

For, were it otherwise, races yet needing coercive government might reason their way to the conclusion that coercive government is bad, as readily as more advanced races. And did they do this, social dissolution would ensue ; for they would not then remain contented under that stringent rule needed to keep them in the social state.

The process by which a change of political arrangements is effected, when the incongruity between them and the popular character becomes sufficient, must be itself in keeping with that character, and must be violent or peaceful accordingly. There are not a few who exclaim against all revolutions wrought out by force of arms ; forgetting that the quality of a revolution, like that of an institution, is determined by the nature of those who make it. Moral suasion is very admirable ; good for us good, indeed, for all who can be induced to use it. But to suppose that in the earlier stages of social growth, moral suasion can be employed, or, if employed, would answer, is to overlook the conditions. Stating the case mechanically, we may say that as, in proportion to their unfitness for associated life, the framework within which men are restrained must be strong, so must the efforts required to break up that framework, when it is no longer fit, be convulsive. The existence of a Government which does not bend to the popular will—a despotic Government—presupposes several circumstances which make any change but a violent one impossible. First, for coercive rule to have been practicable, implies in the people a predominance of that awe of power ever indicative of still lingering savageness. Moreover, with a large amount of power-worship present, disaffection can take place only when the accumulated evils of misgovernment have generated great exasperation. Add to which, that as abundance of the sentiment upholding external rule, involves lack of the sentiments producing internal rule, no such

check to excesses as that afforded by a due regard for the lives and claims of others, can be operative. And where there are comparatively active destructive propensities, extreme anger, and deficient self-restraint, violence is inevitable. Peaceful revolutions occur under quite different circumstances. They become possible only when society, no longer consisting of members so antagonistic, begins to cohere from its own internal organization, and needs not be kept together by unyielding external restraints ; and when, by consequence, the force required to effect change is less. They become possible only when men, having acquired greater adaptation to the social state, will neither inflict on one another nor submit to such extreme oppressions ; and when, therefore, the causes of popular indignation are diminished. They become possible only when character has grown more sympathetic ; and when, as a result of this, the tendency towards angry retaliation is partially neutralized. Indeed, the very idea that reforms may and ought to be effected peacefully, implies a large endowment of the moral sense. Without this, such an idea cannot even be conceived, much less carried out ; with this, it may be both.

Hence, we must look on social convulsions as on other natural phenomena, which work themselves out in a certain inevitable, unalterable way. If such and such events had not occurred, say you, the result would have been otherwise ; if this or that man had lived, he would have prevented the catastrophe. Do not be thus deceived. These changes are brought about by a power far above individual wills. Incongruity between character and institutions is the disturbing force, and a revolution is the act of restoring equilibrium. Accidental circumstances modify the process, but do not essentially alter the effect.

That these violent overturnings of early institutions fail to do what their originators hope, and that they finally result in the setting up of institutions

not much better than those superseded, is quite true. But it is none the less true that the modifications they effect can be effected in no other way. Non-adaptation necessitates a bad mode of making changes, as well as a bad political organization. Not only must the habitual rule it calls for be severe, but even small ameliorations of this cannot be obtained without much suffering. Conversely, the same causes which render a better social state possible, render the successive modifications of it easier. These occur under less pressure, with smaller disturbance, and more frequently; until, by a gradual diminution in the amounts and intervals of change, the process merges into one of uninterrupted growth.

There is another form under which civilization can be generalized. We may consider it as a progress towards that constitution of man and society required for the complete manifestation of every one's individuality. To be that which he naturally is—to do just what he would spontaneously do—is essential to the full happiness of each, and therefore to the greatest happiness of all. Hence, in virtue of the law of adaptation, our advance must be towards a state in which this entire satisfaction of every desire, or perfect fulfilment of individual life, becomes possible. In the beginning it is impossible. If uncontrolled, the impulses of the aboriginal man produce anarchy. Either his individuality must be curbed or society must dissolve. With ourselves, though restraint is still needful, the private will of the citizen, not being so destructive of order, has more play. And further progress must be towards increased sacredness of personal claims, and a subordination of whatever limits them.

There are plenty of facts illustrating the thesis that under primitive governments the repression of individuality is greatest, and that it becomes less as we advance. Referring to the people of Egypt, Assyria, China, and Hindostan,

as contrasted with those of Greece, Mr. Grote says—"The religious and political sanction, sometimes combined and sometimes separate, determined for every one his mood of life, his creed, his duties, and his place in society, without leaving any scope for the will or reason of the individual himself." The ownership of people by rulers, from its pure form under Darius, through its various modifications down to the time of "*L'état c'est moi*," and as even still typified among ourselves in the expression, "my subjects," must be considered as a greater or less merging of many individualities in one. The parallel relationships of slaves or serfs to their master, and of the family to its head, have implied the same thing. In short, all despots, whether political or religious, whether of sex, of caste, or of custom, may be generalized as limitations to individuality, which it is in the nature of civilization to remove.

Of course, in advancing from the one extreme, in which the State is everything and the individual nothing, to the other extreme, in which the individual is everything and the State nothing, society must pass through many modified structures. Aristocracy and democracy are not, as they have been called, separate and conflicting principles; but they and their various mixtures with each other and with monarchy, mark the stages in this progress towards complete individuality. Nor is it only by amelioration of governmental forms that the growth of private claims as opposed to public ones is shown. It is shown, too, by the alteration in voluntary unions—in political parties, for instance; the manifest tendency of which is towards dissolution by internal divisions, by diminution of power over their members, by increasing heterogeneity of opinion: that is—by the spread of a personal independence fatal to them. Still better do the changes in religious organizations illustrate this law. That multiplication of sects which has been going on in these latter times with increasing rapidity, and which is now so abundantly exemplified

ity is manifest ; for there is now distinction of parts. To the gelatinous mass with canals running through it, we have superadded, in the *Alcyonide*, a number of digestive sacks, with accompanying mouths and tentacles. Here is, evidently, a partial segregation into individualities. There is still complete community of nutrition, while each polyp has a certain independent sensitiveness and contractility. Let us look next at the common *Hydra*, or fresh-water polyps of our ponds. These creatures multiply by gemmation, that is, by the budding out of young ones from the body of the parent. "During the first period of the formation of these sprouts, they are evidently continuous with the general substance from which they arise ; and even when considerably perfected, and possessed of an internal cavity and tentacula, their stomachs freely communicate with that of their parent. . . . As soon as the newly-formed hydra is capable of catching prey, it begins to contribute to the support of its parent : the food which it captures passing through the aperture at its base into the body of the original polyp. At length, when the young is fully formed, and ripe for independent existence, the point of union between the two becomes more and more slender, until a slight effort on the part of either is sufficient to detach them, and the process is completed. . . . Sometimes six or seven gemmæ have been observed to sprout at once from the same hydra : and although the same process is concluded in twenty-four hours, not unfrequently a third generation may be observed springing from the newly-formed polyps even before their separation from their parent ; eighteen have in this manner been seen united into one group." Here is a creature which cannot strictly be called either simple or compound. In the alcyonide polyp many individuals are *permanently* united together. In this genus they are *temporarily* united in so far as particular individuals are concerned, but otherwise *permanently* so ; for there is always a

group, though that group keeps changing its members.

In independent organisms the law is still seen in successive improvements of structure. By greater individuality of parts--by greater distinctness in the natures and functions of these, all creatures possessing high vitality are distinguished from inferior ones. Those *Hydra* just referred to, which are mere bags, with tentacles round their orifices, may be cut into parts with impunity : the parts severally undertake all the functions. Here, then, is evidently no speciality of character ; the duties of all structures are performed by one tissue, which is not yet *individualized* into separate organs adapted to separate ends. The individuation of organs is traceable throughout the whole range of animal life.

The changes of vital manifestation associated with, and consequent upon, these changes of structure, have the same significance. To possess a greater variety of senses, of instincts, of powers, of qualities--to be more complex in character and attributes, is to be more distinguishable from all other things, or to exhibit a more marked individuality. For, manifestly, as there are some properties which all entities, organic and inorganic, have in common, namely, weight, mobility, inertia, &c. ; and as there are additional properties which all organic entities have in common, namely, powers of growth and multiplication ; and as there are yet further properties which the higher organic entities have in common, namely, sight, hearing, &c. ; then those still higher organic entities possessing characteristics not shared in by the rest, thereby differ from a large number of entities than the rest, and differ in more points - that is, are more separate, more individual. Observe again, that the greater power of self-preservation shown by beings of superior type may also be generalized under this same term--a "tendency to individuation." The lower the organism, the more it is at the *mercy* of external circumstances. It is continually liable

to be destroyed by the elements, by want of food, by enemies ; and eventually is so destroyed in nearly all cases. That is, it lacks power to preserve its individuality. Conversely, where there is strength, sagacity, swiftness (all of them indicative of superior structure), there is corresponding ability to prevent the individuality from being so easily dissolved ; and therefore the individuation is more complete.

In man we see the highest manifestation of this tendency. By virtue of his complexity of structure, he is furthest removed from the inorganic world in which there is least individuality. Again, his intelligence and adaptability commonly enable him to maintain life to old age to complete the cycle of his existence ; that is, to fill out the limits of this individuality to the full. Again, he is self-conscious : that is, he recognizes his own individuality. And, as lately shown, even the change observable in human affairs is still towards a greater development of individuality may still be described as "a tendency to individuation."

But note lastly, and note chiefly, as being the fact to which the foregoing sketch is introductory, that what we call the moral law — the law of equal freedom

is the law under which individuation becomes perfect ; and that ability to recognize and act up to this law, is the final endowment of humanity an endowment now in process of evolution. The increasing assertion of personal rights, is an increasing demand that the external conditions needful to a complete unfolding of the individuality shall be respected. Not only is there now a consciousness of individuality, and an intelligence whereby individuality may be preserved ; but there is a perception that the sphere of action requisite for due development of the individuality may be claimed ; and a correlative desire to claim it. And when the change at present going on is complete, none will be hindered from duly unfolding their natures ; for while every one maintains his own claims, he will respect the like

claims of others. Then, there will no longer be legislative restrictions and legislative burdens ; for by the same process these will have become both needless and impossible. Then will there exist beings whose individualities can be expended to the full in all directions. And thus, perfect morality, perfect individuation, and perfect life will be simultaneously realized.

Yet must this highest individuation be joined with the greatest mutual dependence. Paradoxical though the assertion looks, the progress is at once towards complete separateness and complete union. But the separateness is of a kind consistent with the most complex combinations for fulfilling social wants ; and the union is of a kind that does not hinder entire development of each personality. Civilization is evolving a state of things and a kind of character, in which two apparently conflicting requirements are reconciled. To achieve the greatest sum of happiness, there must, on the one hand, exist an amount of population maintainable only by the best possible system of production ; that is, by the most elaborate subdivision of labour ; that is, by the extremes of mutual dependence : while, on the other hand, each individual must have the opportunity to do whatever his desires prompt. Clearly, these two conditions can be harmonized only by the adaptation humanity is undergoing that process during which all desires inconsistent with the most perfect social organization are dying out, and other desires corresponding to such an organization are being developed. How this will eventuate in producing at once perfect individuation and perfect mutual dependence, may not be at once obvious ; but probably an illustration will sufficiently elucidate the matter. Here are certain domestic affections, which can be gratified only by the establishment of relationships with other beings. In the absence of those beings, and the consequent dormancy of the feelings with which they are regarded,

life is incomplete—the individuality is shorn of its fair proportions. Now as the normal unfolding of the conjugal and parental elements of the individuality, depends on having a family; so, when civilization becomes complete, will the normal unfolding of all other elements of the individuality depend upon the existence of the civilized state. Just that kind of individuality will be acquired which finds in the most highly-organized community the fittest sphere for its manifestation—which finds in each social arrangement a condition answering to some faculty in itself—which could not, in fact, expand at all, if otherwise circumstanced. The ultimate man will be one whose private requirements coincide with public ones. He will be that manner of man who, in spontaneously fulfilling his own nature, incidentally performs the functions of a social unit; and yet is only enabled so to fulfil his own nature by all others doing the like.

How truly, indeed, human progress is towards greater mutual dependence, as well as towards greater individuation—how truly the welfare of each is daily more involved in the welfare of all—and how truly, therefore, it is the interest of each to respect the interest of all, may, with advantage, be illustrated at length; for it is a fact of which many seem woefully ignorant. Men cannot break that vital law of the social organism—the law of equal freedom—without penalties in some way or other coming round to them. Being themselves members of the community, they are affected by whatever affects it. Upon the goodness or badness of its state depends the greater or less efficiency with which it ministers to their wants; and the less or greater amount of evil it inflicts on them. Through those vicious arrangements that hourly gall them, they feel the accumulated result of all sins against the social law: their own sins included. And they suffer for these sins, not only in extra restraints and alarms, but in the

extra labour and expense required to compass their ends.

That every trespass produces a reaction, partly general and partly special—a reaction which is extreme in proportion as the trespass is great—has been more or less noticed in all ages. The remark is as old as the time of Thales that tyrants rarely die natural deaths. From his day to ours, the thrones of the East have been continually stained with the blood of their successive occupant. The early histories of all European States and the recent history of Russia, illustrate the same truth; and if we are to judge by his habits, the present Czar lives in constant fear of assassination. Nor do we find that those who bear universal sway, and seem able to do as they please, can really do so. They limit their own freedom in limiting that of others: their despotism recoils, and puts them also in bondage. We read for instance, that the Roman emperor were the puppets of their soldiers. “I the Byzantine palace,” says Gibbon “the emperor was the first slave of the ceremonies he imposed.” Speaking of the tedious etiquette of the time of Louis the Grand, Madame de Maintenon remarks—“Save those only who fill the highest stations, I know of none more unfortunate than those who envy them. If you could only form an idea of what it is!” The same reaction is felt by slave-owners. Some of the West India planters have acknowledged that before negro emancipation they were the greatest slaves on their estates. The Americans, too, are shackled in various ways by their own injustice. In the South, the whites are self-coerced, that they may coerce the blacks. Marriage with one of the mixed race is forbidden; there is a slave-owning qualification for senators; a man may not liberate his own slaves without leave; and only at the risk of lynching can any one say a word in favour of abolition.

<sup>1</sup> Nicholas was emperor when this was written; but though he died from natural causes his son was assassinated, and his grandson has been more than once nearly assassinated.

It is, indeed, becoming clear to most that habitual gross transgressions return upon the perpetrators—that “this even-handed justice commands the ingredients of the poisoned chalice to our own lips”; but it is not yet clear to them that the like is true of those lesser transgressions they themselves persist in. Probably the modern maintainers of class power can see well enough that their feudal ancestors paid dearly for keeping the masses in thraldom. They can see that, what with armour and hidden mail, dimly-lighted rooms, precautions against poison, and constant fears of treachery, these barons had but uncomfortable lives. They can see that in Jacqueries, in Gallician massacres, and French revolutions, there arrive fatal settlements of long standing balances. But they cannot see that their own inequitable deeds, in one way or other, come home to *them*. Just as these feudal nobles mistook the evils they suffered under for unalterable ordinances of Nature, never dreaming that they were the reflex results of tyranny, so do their descendants fail to perceive that many of their own unhappinesses are similarly generated.

And yet, while in some cases it is scarcely possible to trace the secret channels through which our misbehaviour to others returns upon us, there are other cases in which the reaction is palpable. People rushing out of a theatre on fire, and in their eagerness to get before one another jamming up the doorways, offer a good example of unjust selfishness defeating itself. In such cases it is clear enough, that by trespassing upon the claims of others, men hurt themselves also. The reaction is here direct and immediate. In other cases reaction comes round by some circuitous route, or after a considerable lapse of time, or in an unrecognized form. The squire who thinks it good policy to clear his estate of cottages, and saddle some other place with the paupers, forgets that the landowners in neighbouring parishes will eventually defeat him by doing the same;

or that if he is so situated as to settle his labourers on a town, the walking of extra miles to and fro must lower the standard of a day's work, raise the cost of cultivation, and, in the end, decrease rent. Nor does he see that by the overcrowded bedrooms and neglected repairs to which this policy leads, he is generating debility or disease, and raising his poors'-rates in one way, while he lowers them in another. The Dorsetshire farmer who pays wages in tailings of wheat charged above market price, imagines he is economizing. It never occurs to him that he loses more than the difference by petty thefts, by the destruction of his hedges for fuel, by the consequent pounding of his cattle, and by the increase of county-rates for the prosecution of robbers and poachers. It seems very clear to the tradesman that an extra profit made by adulterating goods, is so much pure gain; and for a while, perhaps, it may be. By and-by, however, his competitors do as he does, and the rate of profit is then brought down to what it was before. Meanwhile the general practice of adulteration has been encouraged—has got into other departments has deteriorated the articles our shopkeeper buys; and thus, in his capacity of consumer, he suffers from the vicious system he has helped to strengthen. When, during negro apprenticeship, the West Indian planters had to value slaves who wished to buy themselves off, before “the Queen's free,” they no doubt thought it cunning to make oath to a higher worth per day than the true one. But when, afterwards, having to pay wages, they had their own estimates quoted to them, and found that the negroes would take nothing less, they probably repented their dishonesty. It is often long before these recoils come, but they do come, nevertheless. See how the Irish landlords have been punished for their rack-renting, their encouragement of middlemen, and their recklessness of popular welfare. Note, too, how for having abetted those who wronged Ireland, England has to pay a penalty in the shape of loans which are not refunded,

and in the misery produced by the swarms of indigent immigrants, who tend to bring down her own people to their level. Be they committed by many or by few, breaches of equity are in the long run self-defeating. While men continue social units, they cannot transgress the life-principle of society without disastrous consequences somehow or other coming back upon them.

Not only does the ultimate welfare of the citizen demand that he should himself conform to the moral law; it also concerns him that every one else should conform to it. This inter-dependence which the social state necessitates makes all men's business his business, in an indirect way. To people whose eyes do not wander beyond their ledgers, it seems of no consequence how the affairs of mankind go. They think they know better than to trouble themselves about public matters, making enemies and damaging their trade. Yet if they are indeed so selfish as to care nothing for their fellow-creatures while their own flesh-pots are well filled, let them learn that they have a pounds, shillings, and pence interest at stake. Mere pocket-prudence should induce them to further human welfare, if no higher motive will. Can they not see that when buying meat and bread and groceries, they have to give something towards maintaining prisons and police? Can they not see that in the price of a coat they are charged a large per-cent-age to cover the tailor's bad debts? Every transaction of their lives is in some way hampered by the general immorality. They feel it in the rate of interest demanded for capital, which (neglecting temporary variations) is high in proportion as men are bad.<sup>1</sup> They feel it in the amount of attorneys' bills; or in having to suffer robbery, lest the law should commit on them greater robbery.

<sup>1</sup> When dishonesty and improvidence are extreme, capital cannot be had under 30 to 40 per cent., as in the Burmese empire, or in England during the reign of King John.—See Mill's *Principles of Political Economy*.

They feel it in their share of the two and a half millions a year which our metallic currency costs. They feel it in those collapses of trade which follow extensive gambling speculations. It seems to them an absurd waste of time to help in spreading independence among men, and yet, did they call to mind how those railway-shares, which they bought at a premium, went down to a ruinous discount because the other directors cringed to a rich bully, they would learn that the prevalence of a manly spirit may become of money-value to them. They suppose themselves unconcerned in the quarrels of neighbouring nations; and yet, on examination, they will find that a Hungarian war by the loans it calls for, or a Danish blockade by its influence on our commerce, more or less remotely affects their profits, in whatever secluded nook of England they may live. Their belief is that they are not at all interested in the good government of India; and yet a little reflection would show them that they continually suffer from those fluctuations of trade consequent on the irregular and insufficient supply of cotton from America—fluctuations which would probably have ceased, had not India been exhausted by its ruler's extravagance. Not interested? Why even the better education of the Chinese is of moment to them, for Chinese prejudice shuts out English merchants. Not interested? Why they have a stake in the making of American railways and canals, for these ultimately affect the price of bread in England. Not interested? Why the accumulation of wealth by every people on the face of the Earth concerns them; for while it is the law of capital to overflow from those places where it is abundant to those where it is scarce, rich nations can never fully enjoy the fruits of their own labour until other nations are rich. The well ordering of human affairs in the remotest communities is beneficial to all men; the ill ordering of them injurious to all men. And though the citizen may be but slightly acted upon by each particular

good or evil influence at work within his own society, and still more slightly by each of those at work within other societies—although the effect on him may be infinitesimal, yet it is on the cumulative result of myriads of these infinitesimal influences that his happiness or misery depends.

Still more clearly seen in this interweaving of personal interests with social interests, when we discover how essentially *vital* is the connexion between each person and the society of which he is a unit. We commonly enough compare a nation to a living organism. We speak of “the body politic,” of the functions of its parts, of its growth, and of its diseases, as though it were a creature. But we usually employ these expressions as metaphors, little suspecting how close is the analogy, and how far it will bear carrying out. So completely, however, is a society organized on the same system as an individual being, that we may perceive something more than analogy between them. Let us look at a few of the facts.

Observe, first, that the parallel becomes far clearer when we learn that the body of an ordinary animal is itself compounded of innumerable microscopic organisms, which possess a kind of independent vitality, which grow by imbibing nutriment from the circulating fluids, and which multiply, as the infusorial monads do, by spontaneous fission. The whole process of development, beginning with the first change in the ovum and ending with the production of an adult creature, is fundamentally a perpetual increase in the number of these cells by the mode of fissiparous generation. On the other hand, that gradual decay witnessed in old age, is in essence a cessation of this increase. During health, the vitality of these cells is subordinated to that of the system at large; and the presence of insubordinate cells implies disease. Thus, in the human being, small-pox arises from the intrusion of a species of cell foreign to

that community of cells of which the body consists;—a cell which, absorbing nourishment from the blood, rapidly multiplies by spontaneous division, until its progeny have diffused themselves throughout the tissues; and if the excreting energies of the system fail to get rid of these aliens, death ensues. In certain states of body, indigenous cells take on new forms of life; and, by continuing to reproduce their like, give origin to parasitic growths, such as cancer. Under the microscope, cancer can be identified by a specific element, known as the cancer-cell. Hence we are warranted in considering the body as a commonwealth of monads, each of which has independent powers of life, growth, and reproduction; each of which unites with a number of others to perform some function needful for supporting itself and all the rest; and each of which absorbs its share of nutriment from the blood. And then thus regarded, the analogy between an individual being and a human society, in which each man, while helping to subserve some public want, absorbs a portion of the circulating stock of commodities brought to his door, is palpable enough.

A still more remarkable fulfilment of this analogy is seen in the fact, that the different kinds of organization which society takes on, in progressing from its lowest to its highest phase of development, are similar in principle to the different kinds of animal organization. Creatures of inferior types are little more than aggregations of numerous like parts—are moulded on what Professor Owen terms the principle of vegetative repetition; and in tracing the forms assumed by successive grades above these, we find a gradual diminution in the number of like parts, and a multiplication of unlike ones. At the one extreme there are but few functions, and many similar agents to each function: at the other, there are many functions, and few similar agents to each function. Thus the visual apparatus in a fly consists of two groups of fixed lenses,

numbering in some species 20,000. Every one of these lenses produces an image; but as its field of view is extremely narrow, and as there exists no power of adaptation to different distances, the vision obtained is probably very imperfect. The mammal, on the other hand, possesses but two eyes; but each of these includes numerous appendages. It is compounded of several refracting structures, having different forms and duties. These are capable of various focal adjustments. There are muscles for directing them to the right and to the left, to the ground and to the sky. There is a curtain (the iris) to regulate the quantity of light admitted. There is a gland to secrete, a tube to pour out, and a drain to carry off, the lubricating fluid. There is a lid to wipe the surface, and there are lashes to yield shade and to give warning on the approach of foreign bodies. Now the contrast between these two kinds of visual organs is the contrast between all lower and higher types of structure. If we examine the framework employed to support the tissues, we find it consisting in the *Annelida* (the common worm, for instance) of an extended series of rings. In the *Myriapoda*, which stands next above the *Annelida*, these rings are less numerous and more dense. In the higher *Myriapoda*, they are united into a comparatively few large and strong segments; while in the *Insecta* this condensation is carried still further. Speaking of analogous changes in the crustaceans, the lowest of which is constructed much as the centipede, and the highest of which (the crab) has very many of its segments united, Professor Jones says—“And even the steps whereby we pass from the Annelidan to the Myriapod, and from thence to the Insect, the Scorpion, and the Spider, seem to be repeated as we thus review the progressive development of the class before us.” Mark, again, that these modifications of the exo-skeleton are paralleled by those of the endo-skeleton. The vertebræ are numerous in fish and in the ophidian

reptiles. They are less numerous in the higher reptiles; less numerous still in mammals; and while their number is diminished, their forms and the functions of their appendages are varied, instead of being, as in the eel or the snake, nearly all alike. Thus, also, is it with locomotive organs. The spines of the echinus and the suckers of the star fish are multitudinous. So likewise are the legs of the centipede. In the crustaceans we come down to fourteen, twelve, and ten; in the arachnida and insects to eight and six; in the lower mammalia to four; and in man to two. The successive modifications of the digestive cavity are of analogous nature. Its lowest form is that of a sack with but one opening. Next it is a tube with two openings, having different offices. And in higher creatures, this tube, instead of being made up of absorbents from end to end—that is, instead of being an aggregation of like parts—is modified into many unlike ones, having different structures adapted to the different stages into which the alimentary function is now divided. Even the classification under which man, as forming the order *Bimana*, is distinguished from the most nearly related order *Quadrupana*, is based on a diminution in the number of organs which have similar forms and duties.

Now just the same coalescence of like parts and separation of unlike ones—just the same increasing subdivision of functions—takes place in the development of society. The earliest social organisms consist almost wholly of repetitions of one element. Every man is a warrior, hunter, fisherman, builder, agriculturist, toolmaker. Each portion of the community performs the same duties with every other portion; much as each slice of the polyp's body is alike stomach, muscle, skin, and lungs. Even the chiefs, in whom a tendency towards separateness of function first appears, still retain their similarity to the rest in economic respects. The next stage is distinguished by a segregation of these social units into a few

distinct classes—warriors, priests, and slaves. A further advance is seen in the sundering of the labourers into different castes, having special occupations, as among the Hindoos. And, without further illustration, the reader will at once perceive, that from these inferior types of society up to our own complicated and more perfect one, the progress has ever been of the same nature. While he will also perceive that this coalescence of like parts, as seen in the concentration of particular manufactures in particular districts, and this separation of agents having separate functions as seen in the more and more minute division of labour, are still going on<sup>1</sup>

Significant of the alleged analogy is the further fact consequent upon the above, that the sensitiveness exhibited by societies of low and high structures differs in degree, as does the sensitiveness of similarly-contrasted creatures. That faculty possessed by inferior organisms of living on in each part after being cut in pieces, is a manifest corollary to the other peculiarity just described; namely, that they consist of many repetitions of the same elements. The ability of the several portions into which a polyp has been divided, to grow into complete polyps, obviously implies that each portion contains all the organs needful to life; and each portion can be thus constituted only when those organs recur in every part of the original body. Conversely, the reason why any member of a more highly-organized being cannot live when separated from the rest, is that it does not include all the vital elements, but is dependent for its supplies of nutriment, nervous energy, oxygen, &c., upon the members from which it has been cut off. Of course, then, the earliest and latest forms of society, being

similarly distinguished in structure, will be similarly distinguished in susceptibility to injury. Hence it happens that a tribe of savages may be divided and subdivided with little or no inconvenience to the several sections. Each of these contains every element which the whole did—is just as self-sufficing, and quickly assumes the simple organization constituting an independent tribe. Hence, on the contrary, it happens, that in a community like our own, no part can be cut off or injured without all parts suffering. Annihilate the agency employed in distributing commodities, and much of the rest would die before another distributing agency could be developed. Suddenly sever the manufacturing portion from the agricultural portion, and the one would expire outright, while the other would long linger in grievous distress. This inter-dependence is daily shown in commercial changes. Let the factory hands be put on short time, and immediately the colonial produce markets of London and Liverpool are depressed. The shop-keeper is busy or otherwise, according to the amount of the wheat crop. And a potato-blight may ruin dealers in consols.

Thus do we find, not only that the analogy between a society and a living creature is borne out to a degree quite unsuspected by those who commonly draw it, but also that the same definition of life applies to both. This union of many men into one community—this increasing mutual dependence of units which were originally independent—this gradual segregation of citizens into separate bodies with reciprocally-subservient functions—this formation of a whole consisting of unlike parts—this growth of an organism, of which one portion cannot be injured without the rest feeling it—may all be generalized under the law of individuation. The development of society, as well as the development of man and the development of life generally, may be described as a tendency to individuate—to become a thing. And rightly interpreted, the manifold forms

<sup>1</sup>In the generalizations contained in the two above paragraphs, and in the recognition of their parallelism, may be seen the first step towards the general doctrine of Evolution. Dating back as they do to 1850, they show that this first step was taken earlier than I supposed.

of progress going on around us are uniformly significant of this tendency.

Returning now to the point whence we set out, the fact that public interests and private ones are essentially in unison, cannot fail to be more vividly realized, when so vital a connexion is found to subsist between society and its members. Though it would be dangerous to place implicit trust in conclusions founded upon the analogy just traced, yet, harmonizing as they do with conclusions deducible from every-day experience, they unquestionably enforce these. When, observing the reactions entailed by after breaches of equity, the citizen contemplates the relation in which he stands to the body politic—when he learns that it has a species of life, and conforms to the same laws of growth and organization

that a being does—when he finds that while social health, in a measure, depends on the fulfilment of some function, which he takes part, his happiness depends on the normal actions of every organ in the social body—when he duly understands this, he must see that his own welfare and all men's welfare are inseparable. He must see that whatever produces a diseased state in one part of the community, must inevitably inflict injury upon all other parts. He must see that his own life can become what it should be, only as fast as society become what it should be. In short, he must become impressed with the salutary truth that no one can be perfectly free till all are free; no one can be perfectly moral till all are moral; no one can be perfectly happy till all are happy.

THE END

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# THE ORIGINS OF RELIGION

AND OTHER ESSAYS

BY

ANDREW LANG, M.A.

HON. FELLOW OF MERTON COLLEGE  
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## INTRODUCTION

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THE first eight Essays in this R.P.A. Cheap Reprint form the larger part of a book<sup>1</sup> which was first published twenty-four years ago, and in these years much has been added to our knowledge of some of the problems with which they deal. Mr. Howitt has published wide investigations of the society of the Australian aborigines, writing mainly in the *Journal of the Anthropological Institute*. Messrs. Spencer and Gillen, in their *Native Races of Central Australia*,<sup>2</sup> *Northern Tribes of Central Australia* (1904), and *Native Tribes of South East Australia* (1904), have given us a masterly treatise on the central tribes among whom they sojourned. Mrs. Langloh Parker has done similar work for *The Euahlayi Tribe*. In America, the Bureau of Ethnology has continued to produce valuable volumes yearly; while Mr. Haddon with a Cambridge party has explored the islands between Australia and New Guinea, and the regretted Miss Kingsley has described the manners and customs of Western Africa. In addition to these and many other works of "field naturalists" among savage races, the second edition of Mr. J. G. Frazer's *Golden Bough* contains an unrivalled collection of materials derived from all sources.

As far as concerns the essays, that on "The Bull-Roarer" may be enriched by the discovery that palæolithic man, in Europe, had *pendeloques* exactly in the shape, and decorated with the patterns, of bull-roarers, or *churinga*, as described among the natives of Central Australia by Messrs. Spencer and Gillen. Anyone who compares a bone amulet of the Saint Marcel cave, published by the Abbé Breuil, with those in the book of Messrs. Spencer and Gillen, must observe that the Australian and palæolithic objects are identical.<sup>3</sup> As the noise of the bull-roarer, in Australia and elsewhere, when produced at the mysteries, is taken to be that of a supernormal Being who directs the proceedings, it may be provisionally inferred that palæolithic man entertained similar religious ideas, while neolithic man, in the Baltic provinces, has left bull-roarers, or amulets of that shape, in amber.

For the survival of the bull-roarer as a "thunder-spell" in Scotland, Mr. Haddon's *The Study of Man* (pp. 277-82) may be consulted; the

<sup>1</sup> *Custom and Myth*.

<sup>2</sup> Macmillan, London, 1899.

<sup>3</sup> Cf. *L'Anthropologie*, vol. xiii., p. 152, fig. 4a. See, too, Mr. Cook, in the same periodical, vol. xiv., pp. 657, 658.

essay shows every stage in the religious and magical development of this ancient instrument : which may represent a god, or may sink to the estate of a mere toy. I was, I think, the first to observe that the thing existed in the far away and dateless age of palæolithic man.

With regard to the essay on "Apollo and the Mouse," it is to be remembered that animals acquire sacredness in religion in many ways besides what they may inherit from totemism. The works of Mr. J. G. Frazer show that, among agricultural peoples, the "Corn Spirit" is recognised in a vast number of animal forms, which are prominent in agricultural magic and religion. Thus a sacred animal associated with a god, say the Pig with Demeter, is not necessarily a survival of a totem. That the Indo-European peoples were once totemic cannot be certainly proved, though many facts point in that direction. When we first meet them in history they have reached a point in civilisation at which we could not expect to discover more than faint and dubious totemic traces.

A correspondent, whom I am not free to name, makes the ingenious suggestion, as to Apollo Smintheus, that the ancients may have detected a connection between rats and the conveyance of the infection of plague, and may have associated both with Apollo and with *Æsculapius*. The Philistines, in 1 Samuel v. 6, had bubonic plague (emerods), and sent to Israel with the captured Ark golden images of the buboes, and of *mice* in our English version. Why mice? If they sent images of rats, they may have connected these animals with the spread of the pestilence. On the other hand, the vermin from which Apollo Smintheus took his name were not rats, but shrew-mice.

The essay on "The Divining Rod" may lead anyone who cares for the subject to study Professor Barrett's two large works about this kind of "automatism" in the Proceedings of the Society for Psychical Research. The Divining Rod is now so far rehabilitated that towns and colleges employ the services of the "dowser." In the essay on "The Art of Savages" probably too little is allowed for the tendency of representative art to "schematise" its designs into what seem mere geometrical patterns. It has been found, too, that, while the Australian tribes of the south use linear patterns only, those of the centre and north use curves, spirals, and concentric circles, a difference not easily to be explained. Mr. Haddon's *Evolution in Art* may be recommended to the student.

As concerns "The Midnight Axe," I have materials for a whole essay on this very curious topic. Mr. E. N. Brunett, of Hertford College, Oxford, in 1892 described to me his own experiences of "the mysterious sounds of chopping wood at night," in the isle of St. Helena. "Many times I have stood with others and listened as the *thud, thud*, of the axe came to our ears from a spot about 150 or 200 yards distant, the spot being bare of trees or bushes.....The whole thing was inexplicable."

Mr. Stephen Ponder adds the following explanation and myth:—

5th January, 1892.

DEAR SIR,—In reference to your note in this month's *Longman's* as to the "Midnight Axe," you may be interested to know that in the jungle of Sumatra and the Malay Peninsula there is a bird which exactly reproduces the sound of an axe on wood. This is the long-tailed hornbill. I have often seen him perch on a high tree, strike five or six blows on the trunk with his immense bony helmet, and then give out a burst of yelling laughter that you can hear a mile off. The Malays call him "Tebang Mentuah," which means "feller of his mother-in-law." They say that he was once a man, who, being aggrieved by his relative, went by night and chopped away the posts of her house, so that it fell and killed her; but before he had his laugh out (a very unusual performance for a Malay) he became a bird of this species. This does not, of course, explain the legends of Ceylon and Samoa, where hornbills do not exist; but bird-noises at night are wonderfully deceptive.

From Madagascar the Rev. T. J. Fuller wrote: "I came here in June, 1895. The Mission House is built in a clearing in the belt of forest running along the coast, and quite close to the beach. It stands alone and at some distance from the other mission buildings in the same large, unenclosed compound. We lie quite outside the native village, and there is not a single hut for miles beyond in the direction of the forest. There is a Betsimisaraka cemetery, strongly palisaded or stockaded, about 100 yards to the north of my bedroom. Soon after we came here we were frequently disturbed, late into the night and long after retiring, by distinct sounds of trees being felled in the near neighbourhood of our bedroom. Even a town-bred person would not be likely to mistake the sound; and I, who once lived in the Backwoods, am even less liable to be mistaken. The axe, as it bites into a tree, has an echo peculiar to itself. We sought an explanation in ordinary phenomena, and made inquiries, but to no purpose." I myself have found the "Midnight Axe" in County Sligo.

"Savage Spiritualism" and "Ancient Spiritualism" are taken from *Cock Lane and Common Sense*, and "Crystal Gazing" from *The Making of Religion*. The last essay is a new one, not hitherto published.

A. L.

May 1st, 1908.

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the horse would have been sacrificed.<sup>1</sup> We may observe the persistence of the ceremony by which the monarch, at his coronation, takes his seat on the sacred stone of Scone. Not to speak here of our own religious traditions, the old vein of savage rite and belief is found very near the surface of ancient Greek religion. It wants but some stress of circumstance, something answering to the storm shower that reveals the flint arrow-heads, to bring savage ritual to the surface of classical religion. In sore need, a human victim was only too likely to be demanded; while a feast day, or a mystery, set the Greeks dancing serpent-dances or bear-dances like Red Indians, or swimming with sacred pigs, or leaping about in imitation of wolves, or holding a dog-feast, and offering dogs' flesh to the gods.<sup>2</sup> Thus the student of folklore soon finds that he must enlarge his field, and examine, not only popular European story and practice, but savage ways and ideas, and the myths and usages of the educated classes in civilised races. In this extended sense the term "folklore" will frequently be used in the following essays. The idea of the writer is that mythology cannot fruitfully be studied apart from folklore, while some knowledge of anthropology is required in both sciences.

The science of Folklore, if we may call it a science, finds everywhere, close to the surface of civilised life, the remains of ideas as old as the stone elf-shots, older than the celt of bronze. In proverbs and riddles, and nursery tales and superstitions, we detect the relics of a stage of thought which is dying out in Europe, but which still exists in many parts of the world. Now, just as the

<sup>1</sup> About twenty years ago, the widow of an Irish farmer, in Derry, killed her deceased husband's horse. When remonstrated with by her landlord, she said: "Would you have my man go about on foot in the next world?" She was quite in the savage intellectual stage.

<sup>2</sup> "At the solemn festival suppers, ordained for the honour of the gods, they forgot not to serve up certain dishes of young whelps' flesh" (Pliny, *H. N.*, xxix. 4).

flint arrow-heads are scattered everywhere, in all the continents and isles, and everywhere are much alike, and bear no very definite marks of the special influence of race, so it is with the habits and legends investigated by the student of folklore. The stone arrow-head buried in a Scottish cairn is like those which were interred with Algonquin chiefs. The flints found in Egyptian soil, or beside the tumulus on the plain of Marathon, nearly resemble the stones which tip the reed arrow of the modern Samoyed. Perhaps only a skilled experience could discern, in a heap of such arrow-heads, the specimens which are found in America or Africa from those which are unearthed in Europe. Even in the products of more advanced industry we see early pottery, for example, so closely alike everywhere that, in the British Museum, Mexican vases have, ere now, been mixed up on the same shelf with archaic vessels from Greece. In the same way, if a superstition or a riddle were offered to a student of folklore, he would have much difficulty in guessing its *provenance*, and naming the race from which it was brought. Suppose you tell a folklorist that, in a certain country, when anyone sneezes, people say "Good luck to you," the student cannot say *a priori* what country you refer to, what race you have in your thoughts. It may be Florida, as Florida was when first discovered; it may be Zululand, or West Africa, or ancient Rome, or Homeric Greece, or Palestine. In all these, and many other regions, the sneeze was welcomed as an auspicious omen. The little superstition is as widely distributed as the flint arrow-heads. Just as the object and use of the arrow-heads became intelligible when we found similar weapons in actual use among savages, so the salutation to the sneezer becomes intelligible when we learn that the savage has a good reason for it. He thinks the sneeze expels an evil spirit. Proverbs, again, and riddles are as universally scattered

## THE METHOD OF FOLKLORE

and the Wolufs puzzle over the same *devinettes* as the Scotch schoolboy or the Breton peasant. Thus, for instance, the Wolufs of Senegal ask each other, "What flies for ever, and rests never?" —Answer, "The Wind." "Who are the comrades that always fight, and never hurt each other?" —"The Teeth." In France, as we read in the *Recueil de Calembours*, the people ask, "What runs faster than a horse, crosses water, and is not wet?" —Answer, "The Sun." The Samoans put the riddle, "A man who stands between two ravenous fishes?" —Answer, "The tongue between the teeth." Again, "There are twenty brothers, each with a hat on his head?" —Answer, "Fingers and toes, with nails for hats." This is like the French "*Un père a douze fils?*" — "*L'an.*"<sup>1</sup> A comparison of M. Rolland's *Devinettes* with the Woluf conundrums of Boilat, the Samoan examples in Turner's *Samoa*, and the Scotch enigmas collected by Chambers, will show the identity of peasant and savage humour.

A few examples, less generally known, may be given to prove that the beliefs of folklore are not peculiar to any one race or stock of men. The first case is remarkable; it occurs in Mexico and Ceylon, and has been found in other regions. In *Macmillan's Magazine*<sup>2</sup> is published a paper by Mrs. Edwards, called "The Mystery of the Pezazi." The events described in this narrative occurred on August 28th, 1876, in a bungalow some thirty miles from Badiella. The narrator occupied a new house on an estate called Allagalla. Her native servants soon asserted that the place was haunted by a Pezazi. The English visitors saw and heard nothing extraordinary till a certain night. An abridged account of what happened then may be given in the words of Mrs. Edwards:—

Wrapped in dreams, I lay, on the

<sup>1</sup> Compare *Claobulus*, Fr. 2; Bergk, *Lyr.* Gr., iii. 201. Ed. 4.

<sup>2</sup> November, 1880.

night in question, tranquilly sleeping, but gradually roused to a perception that discordant sounds disturbed the serenity of my slumber. Loth to stir, I still dozed on, the sounds, however, becoming, as it seemed, more determined to make themselves heard; and I awoke to the consciousness that they proceeded from a belt of adjacent jungle, and resembled the noise that would be produced by some person felling timber.

Shutting my ears to the disturbance, I made no sign, until, with an expression of impatience, E.— suddenly started up, when I laid a detaining grasp upon his arm, murmuring that there was no need to think of rising at present—it must be quite early, and the kitchen coolly was doubtless cutting firewood in good time. E.— responded, in a tone of slight contempt, that no one could be cutting firewood at that hour, and the sounds were more suggestive of felling jungle; and he then inquired how long I had been listening to them. Now thoroughly aroused, I replied that I had heard the sounds for some time, at first confusing them with my dreams, but soon sufficiently awakening to the fact that they were no mere phantoms of my imagination, but a reality. During our conversation the noises became more distinct and loud; blow after blow resounded, as of the axe descending upon the tree, followed by the crash of the falling timber. Renewed blows announced the repetition of the operations on another tree, and continued till several were devastated.

It is unnecessary to tell more of the tale. In spite of minute examinations and close search, no solution of the mystery of the noises, on this or any other occasion, was ever found. The natives, of course, attributed the disturbance to the *Pezazi* or goblin. No one, perhaps, has asserted that the Aztecs were connected by ties of race with the people of Ceylon. Yet, when the Spaniards conquered Mexico, and when Sahagun (one of the earliest missionaries) collected the legends of the people, he found them, like the Cingalese, strong believers in the mystic tree-felling. We translate Sahagun's account of the "midnight axe":—

When so any man heareth the sound of strokes in the night as if one were felling trees, he reckons it an evil boding. And this sound they call *youaltepuztli* (*youalli*, night; and *tepuztli*, copper), which signifies "the midnight hatchet." The noise cometh about the time of the first sleep, when all men slumber soundly, and the night is still. The sound of strokes smitten was first noted by the temple-servants, called *tlamacazque*, at the hour when they go in the night to make their offering of reeds or of boughs of pine, for so was their custom; and this penance they did on the neighbouring hills, and that when the night was far spent. Whenever they heard such a sound as one makes when he splits wood with an axe (a noise that may be heard afar off), they drew thence an omen of evil, and were afraid, and said that the sounds were part of the witchery of Tezcatlipoca, that often thus dismayeth men who journey in the night. Now, when tidings of these things came to a certain brave man, one exercised in war, he drew near, being guided by the sound, till he came to the very cause of the hubbub. And when he came upon it, with difficulty he caught it, for the thing was hard to catch; nathless, at last he overtook that which ran before him; and behold, it was a man without a heart, and, on either side of the chest, two holes that opened and shut, and so made the noise. Then the man put his hand within the breast of the figure and grasped the breast and shook it hard, demanding some grace or gift.

As a rule, the grace demanded was power to make captives in war. The curious coincidence of the "midnight axe" occurring in lands so remote as Ceylon and Mexico, and the singular attestation by an English lady of the actual existence of the disturbance, makes this *youaltepuztli* one of the quaintest things in the province of the folklorist. But, whatever the cause of the noise, or of the beliefs connected with the noise, may be, no one would explain them as the result of community of race between Cingalese and Aztecs. Nor would this explanation be offered to account for the Aztec and English belief that the creaking of furniture is an omen

of death in a house. Obviously, these opinions are the expressions of a common state of superstitious fancy, not the signs of an original community of origin.<sup>1</sup>

Let us take another piece of folklore. All North-country English folk know the *Kernababy*. The custom of the "Kernababy" is commonly observed in England, or, at all events, in Scotland, where the writer has seen many a kernababy. The last gleanings of the last field are bound up in a rude imitation of the human shape, and dressed in some tag-rags of finery. The usage has fallen into the conservative hands of children; but of old "the Maiden" was a regular image of the harvest goddess, which, with a sickle and sheaves in her arms, attended by a crowd of reapers, and accompanied with music, followed the last carts home to the farm.<sup>2</sup> It is odd enough that "the Maiden" should exactly translate *Kóρη*, the old Sicilian name of the daughter of Demeter. "The Maiden" has dwindled, then, among us to the rudimentary kernababy; but ancient Peru had her own Maiden, her Harvest Goddess. Here it is easy to trace the natural idea at the basis of the superstitious practice which links the shores of the Pacific with our own northern coast. Just as a portion of the yule-log and of the Christmas bread were kept all the year through, a kind of nest-egg of plenteous food and fire, so the kernababy, English or Peruvian, is an earnest that corn will not fail all through the year, till next harvest comes. For this reason the kernababy used to be treasured from autumn's end to autumn's end, though now it commonly disappears very soon after the harvest home. It is thus

<sup>1</sup> Mr. Leslie Stephen points out to me that De Quincey's brother heard the "midnight axe" in the Galapagos Islands (*Autobiographical Sketches*, "My Brother"); see ante pp. 4-5. It is known in Ireland and Madagascar.

<sup>2</sup> "Ah, once again may I plant the great fan on her corn-heap, while she stands smiling by Demeter of the threshing-floor, with sheaves and poppies in her hands" (Theocritus, vii. 155-57).

iat Acosta describes in Grinston's old translation (1604) the Peruvian kernalaby and the Peruvian harvest home:—

This feast is made comming from the *chacra* or farme unto the house, saying certaine songs, and praying that the Mays (maize) may long continue, the which they call *Mama cora*

What a chance this word offers to tymologists of the old school: how promptly they would recognise, in *mama* mother—μήτηρ, and in *cora*—κόρη, the Iother and the Maiden, the feast of Demeter and Persephone! However, be days of that old school of anti-marianism are numbered. To return to the Peruvian harvest home:—

They take a certaine portion of the most fruitefull of the Mays that growes in their farmes, the which they put in a certaine granary which they do calle *Pirua*, with certaine ceremonies, watching three nightes; they put this Mays in the richest garments they have, and, being thus wrapped and dressed, they worship this *Pirua*, and hold it in great veneration, saying it is the Mother of the Mays of their inheritances, and that by this means the Mays augments and is preserved. In this moneth they make a particular sacrifice, and the witches demand of this *Pirua* "if it hath strength sufficient to continue until next yare"; and if it answers "No," then they carry this Mays to the farme to burne, whence they brought it, according to every man's power; then they make another *Pirua*, with the same ceremonies, saying that they renew it, to the ende that the seede of the Mays may not perish.

The idea that the maize can speak need not surprise us; the Mexicans held much the same belief, according to Sahagun:—

It was thought that if some grains of maize fell on the ground, he who saw them lying there was bound to lift them; wherein, if he failed, he harmed the maize, which plained itself of him to God, saying: "Lord, punish this man, who saw me fallen and raised me not again; punish him with famine, that he may learn not to hold me in dishonour."

In all this affair of the Scotch kernalaby, and the Peruvian *Mama cora*, we find no explanation beyond the common

simple ideas of human nature. We are not obliged to hold either that the Peruvians and Scotch are akin by blood, or that, at some forgotten time, they met each other, and borrowed each other's superstitions.<sup>1</sup> Again, when we find Odysseus sacrificing a black sheep to the dead,<sup>2</sup> and when we read that the Ovahereroes in South Africa also appease with a black sheep the spirits of the departed, we do not feel it necessary to hint that the Ovahereroes are of Greek descent, or have borrowed their ritual from the Greeks. The connection between the colour black and mourning for the dead is natural and almost universal.

Examples like these might be adduced in any number. We might show how, in magic, negroes of Barbadoes make clay effigies of their enemies, and pierce them, just as Greeks did in Plato's time, or the men of Accad in remotest antiquity. We might remark the Australian black putting sharp bits of quartz in the tracks of an enemy who has gone by, that the enemy may be lamed; and we might point to Boris Godunof forbidding the same practice among the Russians. We might watch Scotch, and Australians, and Jews, and French, and Aztecs spreading dust round the body of a dead man, that the footprints of his ghost, or of other ghosts, may be detected next morning. We might point to a similar device in a modern novel, where the presence of a ghost is suspected, as proof of the similar workings of the Australian mind and of the mind of Mrs. Riddell. We shall later turn to ancient Greece, and show how the serpent-dances, the habit of smearing the body with clay, and other odd rites of the mysteries, were common to Hellenic religion and to the religion of African, Australian, and American tribes.

Now, with regard to all these strange usages, what is the method of folklore?

<sup>1</sup> In Mr. Frazer's *Golden Bough* is a very large collection of similar harvest rites.

<sup>2</sup> *Odyssey*, xi., 32.

The method is, when an apparently irrational and anomalous custom is found in any country, to look for a country where a similar practice is found, and where the practice is not irrational and anomalous, but in harmony with the manners and ideas of the people among whom it prevails. That Greeks should dance about in their mysteries with harmless serpents in their hands looks quite unintelligible. When a wild tribe of Red Indians does the same thing, as a trial of courage, with real rattlesnakes, we understand the Red Man's motives, and may conjecture that similar motives once existed among the ancestors of the Greeks. Our method, then, is to compare the seemingly meaningless customs or manners of civilised races with the similar customs and manners which exist among the uncivilised and still retain their meaning. It is not necessary for comparison of this sort that the uncivilised and the civilised race should be of the same stock, nor need we prove that they were ever in contact with each other. Similar conditions of mind produce similar practices, apart from identity of race, or borrowing of ideas and manners.

Let us return to the example of the flint arrow-heads. Everywhere neolithic arrow-heads are pretty much alike. The cause of the resemblance is no more than this: that men, with the same needs, the same materials, and the same rude instruments, everywhere produced the same kind of arrow-head. No hypothesis of interchange of ideas or of community of race is needed to explain the resemblance of form in the missiles. Very early pottery in any region is, for the same causes, like very early pottery in any other region. The same sort of similarity was explained by the same resemblances in human nature, when we touched on the identity of magical practices and of superstitious beliefs. This method is fairly well established and orthodox when we deal with usages and superstitious beliefs; but may we apply the same method when we deal with myths?

Here a difficulty occurs. Mythologists, as a rule, are averse to the method of folklore. They think it scientific to compare only the myths of races which speak languages of the same family, and of races which have, in historic times, been actually in proved contact with each other. Thus, most mythologists hold it correct to compare Greek, Slavonic, Celtic, and Indian stories, because Greeks, Slavs, Celts, and Hindoos all speak languages of the same family. Again, they hold it correct to compare Chaldaean and Greek myths, because the Greeks and the Chaldaeans were brought into contact through the Phoenicians, and by other intermediaries, such as the Hittites. But the same mythologists will vow that it is unscientific to compare a Maori or a Hottentot or an Eskimo myth with an Aryan story, because Maoris and Eskimo and Hottentots do not speak languages akin to that of Greece, nor can we show that the ancestors of Greeks, Maoris, Hottentots, and Eskimos were ever in contact with each other in historical times.

Now, the peculiarity of the method of folklore is that it will venture to compare (with due caution and due examination of evidence) the myths of the most widely severed races. Holding that myth is a product of the early human fancy, working on the most rudimentary knowledge of the outer world, the student of folklore thinks that differences of race do not much affect the early mythopoetic faculty. He will not be surprised if Greeks and Australian blacks are in the same tale.

In each case, he holds, all the circumstances of the case must be examined and considered. For instance, when the Australians tell a myth about the Pleiades very like the Greek myth of the Pleiades, we must ask a number of questions. Is the Australian version authentic? Can the people who told it have heard it from a European? If these questions are answered so as to make it apparent that the Australian Pleiad myth is of genuine native origin, we need not

to the conclusion that the Australians are a lost and forlorn branch of the Aryan race. Two other hypotheses present themselves. First, the human species is of unknown antiquity. In the moderate allowance of 250,000 years there is time for stories to have wandered all round the world, as the Aggry beads of Ashanti have probably crossed the continent from Egypt, as the Asiatic jade (if Asiatic it be) arrived at ancient Troy or came into Swiss lake-dwellings, as an African trade-cowry is said to have been found in a Cornish barrow, as an Indian Ocean shell has been discovered in a prehistoric bone-cave in Poland. This slow filtration of tales is not absolutely out of the question. Two causes would especially help to transmit myths. The first is slavery and slave-stealing; the second is the habit of capturing brides from alien stocks, and the law which forbids marriage with a woman of a man's own totem. Alien slaves and captured brides would bring their native legends among alien peoples.

But there is another possible way of explaining the resemblance (granting that it is proved) of the Greek and Australian Pleiad myth. The object of both myths is to account for the grouping and other phenomena of the constellations. May not similar explanatory stories have occurred to the ancestors of the Australians, and to the ancestors of the Greeks, however remote their home, while they were still in the savage condition? The best way to investigate this point is to collect all known savage and civilised stellar myths, and see what points they have in common. If they all agree in character, though the Greek tales are full of grace, while those of the Australians or Brazilians are rude enough, we may plausibly account for the similarity of myths as we accounted for the similarity of flint arrow-heads. The myths, like the arrow-heads, resemble each other because they were originally framed to meet the same needs out of the same material. In the case of the arrow-heads, the need was for something

hard, heavy, and sharp—the material was flint. In the case of the myths, the need was to explain certain phenomena—the material (so to speak) was an early state of the human mind, to which all objects seemed equally endowed with human personality, and to which no metamorphosis appeared impossible.

In the following essays, then, the myths and customs of various peoples will be compared, even when these peoples talk languages of alien families, and have never (so far as history shows us) been in actual contact. Our method throughout will be to place the usage, or myth, which is unintelligible when found among a civilised race, beside the similar myth which is intelligible enough when it is found among savages. A mean term will be found in the folklore preserved by the non-progressive classes in a progressive people. This folklore represents, in the midst of a civilised race, the savage ideas out of which civilisation has been evolved. The conclusion will usually be that the fact which puzzles us by its presence in civilisation is a relic surviving from the time when the ancestors of a civilised race were in the state of savagery. By this method it is not necessary that "some sort of genealogy should be established" between the Australian and the Greek narrators of a similar myth, nor between the Greek and Australian possessors of a similar usage. The hypothesis will be that the myth, or usage, is common to both races, not because of original community of stock, not necessarily because of contact and borrowing, but because the ancestors of the Greeks passed through the savage intellectual condition in which we find the Australians.

The questions may be asked, Has race nothing, then, to do with myth? Do peoples never consciously borrow myths from each other? The answer is that race has a great deal to do with the development of myth, if it be race which confers on a people its national genius, its artistic gifts, and its capacity of becoming civilised. - If race

does this, then race affects, in the most powerful manner, the ultimate development of myth. No one is likely to confound a Homeric myth with a myth from the Edda, nor either with a myth from a Brahmana, though in all three cases the substance, the original set of ideas, may be much the same. In all three you have anthropomorphic gods, capable of assuming animal shapes, tricky, capricious, limited in many undivine ways, yet endowed with magical powers. So far the mythical gods of Homer, of the Edda, of any of the Brahmanas, are on a level with each other, and not much above the gods of savage mythology. This stuff of myth is *quod semper, quod ubique, quod ab omnibus*, and is the original gift of the savage intellect. But the final treatment, the ultimate literary form of the myth, varies in each race. Homeric gods, like Red Indian, Thlinket, or Australian gods, can assume the shapes of birds. But when we read, in Homer, of the arming of Athene, the hunting of Artemis, the vision of golden Aphrodite, the apparition of Hermes, like a young man when the flower of youth is loveliest, then we recognise the effect of race upon myth, the effect of the Greek genius at work on rude material. Between the Olympians and a Thlinket god there is all the difference that exists between the Demeter of Cnidos and an image from Easter Island. Again, the Scandinavian gods, when their tricks are laid aside, when Odin is neither assuming the shape of worm nor of raven, have a martial dignity, a noble enduring spirit of their own. Race comes out in that, as it does in the endless sacrifices, soma drinking, magical austerities, and puerile follies of Vedic and Brahmanic gods, the deities of a people fallen early into its sacerdotage and priestly second childhood. Thus race declares itself in the ultimate literary form and character of mythology, while the common savage basis and stuff of myths may be clearly discerned in the horned, and cannibal, and shape-shifting, and adulterous gods of Greece, of India,

of the North. They all show their common savage origin, when the poet neglects Freya's command and tells of what the gods did "in the morning of Time."

As to borrowing, we have already shown that in prehistoric times there must have been much transmission of myth. The migrations of peoples, the traffic in slaves, the law of exogamy, which always keeps bringing alien women into the families — all these things favoured the migration of myth. But the process lies behind history: we can only guess at it, we can seldom trace a popular legend on its travels. In the case of the cultivated ancient peoples, we know that they themselves believed they had borrowed their religions from each other. When the Greeks first found the Egyptians practising mysteries like their own, they leaped to the conclusion that their own rites had been imported from Egypt. We, who know that both Greek and Egyptian rites had many points in common with those of Mandans, Zunis, Bushmen, Australians — people quite unconnected with Egypt — feel less confident about the hypothesis of borrowing. We may, indeed, regard Adonis, and Zeus Bagaeus, and Melicertes, as importations from Phoenicia. In later times, too, the Greeks, and still more the Romans, extended a free hospitality to alien gods and legends, to Serapis, Isis, the wilder Dionysiac revels, and so forth. But this habit of borrowing was regarded with disfavour by pious conservatives, and was probably, in the width of its hospitality at least, an innovation. As Tiele remarks, we cannot derive Dionysus from the Assyrian *Daian nisi*, "judge of men," a name of the solar god Samas, without ascertaining that the wine-god exercised judicial functions, and was a god of the sun. These derivations, "shocking to common sense," are to be distrusted as part of the intoxication of new learning. Some Assyrian scholars actually derive *Hades* from *Bit Edi* or *Bit Hadi* — "though unluckily," says Tiele, "there

is no such word in the Assyrian text." On the whole topic Ticle's essay<sup>1</sup> deserves to be consulted. Granting, then, that elements in the worship of Dionysus, Aphrodite, and other gods, may have been imported with the strange Egyptian-Assyrian vases and jewels of the Sidonians, we still find the same basis of rude savage ideas. We may push back a god from Greece to Phœnicia, from Phœnicia to Accadia; but, at the end of the end, we reach a legend full of myths like those which Bushmen tell by the camp fire, Eskimo in their dark huts, and Australians in the shade of the *gum-yeh*—myths cruel, puerile, obscene, like the fancies of the savage myth-makers from which they sprang.

<sup>1</sup> *Revue de l'Hist. des Rel.*, vol. ii.

## II.

### THE BULL-ROARER

#### A STUDY OF THE MYSTERIES

As the belated traveller makes his way through the monotonous plains of Australia, through the Bush, with its level expanses and clumps of grey-blue gum trees, he occasionally hears a singular sound. Beginning low, with a kind of sharp tone thrilling through a whirring noise, it grows louder and louder, till it becomes a sort of fluttering windy roar. If the traveller be a new-comer, he is probably puzzled to the last degree. If he be an Englishman, country-bred, he says to himself, "Why, that is the bull-roarer." If he knows the colony and the ways of the natives, he knows that the blacks are celebrating their tribal mysteries. The roaring noise is made to warn all women to keep out of the way. Just as Pentheus was killed (with the approval of Theocritus) because he profaned the rites of the women worshippers of Dionysus, so, among the Australian blacks, men must, at their peril, keep out of the way of female, and women out of the way of male, celebrations.

The instrument which produces the sounds that warn women to remain afar

is a toy familiar to English country lads. They call it the bull-roarer. The common bull-roarer is an inexpensive toy which anyone can make. I do not, however, recommend it to families, for two reasons. In the first place, it produces a most horrible and unexampled din, which endears it to the very young, but renders it detested by persons of mature age. In the second place, the character of the toy is such that it will almost infallibly break all that is fragile in the house where it is used, and will probably put out the eyes of some of the inhabitants. Having thus, I trust, said enough to prevent all good boys from inflicting bull-roarers on their parents, pastors and masters, I proceed (in the interests of science) to show how the toy is made. Nothing can be less elaborate. You take a piece of the commonest wooden board, say the lid of a packing-case, about a sixth of an inch in thickness, and about eight inches long and three broad, and you sharpen the ends. When finished, the toy may be about the shape of a large bay-leaf, or a "fish" used as a counter (that is how the New

Zealanders make it), or the sides may be left plain in the centre, and only sharpened towards the extremities, as in an Australian example lent me by Mr. Tylor. Then tie a strong piece of string, about thirty inches long, to one end of the piece of wood, and the bull-roarer (the Australian natives call it *turndun*, and the Greeks call it *βόμβος*) is complete. Now twist the end of the string tightly about your finger and whirl the bull-roarer rapidly round and round. For a few moments nothing will happen. In a very interesting lecture delivered at the Royal Institution, Mr. Tylor once exhibited a bull-roarer. At first it did nothing particular when it was whirled round, and the audience began to fear that the experiment was like those chemical ones often exhibited at institutes in the country, which contribute at most a disagreeable odour to the education of the populace. But when the bull-roarer warmed to its work, it justified its name, producing what may best be described as a mighty rushing noise, as if some supernatural being "fluttered and buzzed its wings with fearful roar." Grown-up people, of course, are satisfied with a very brief experience of this din, but boys have always known the bull-roarer in England as one of the most efficient modes of making the hideous and unearthly noises in which it is the privilege of youth to delight.

The bull-roarer has, of all toys, the widest diffusion, and the most extraordinary history. To study the bull-roarer is to take a lesson in folklore. The instrument is found among the most widely severed peoples, savage and civilised, and is used in the celebration of savage and civilised mysteries. There are students who would found on this a hypothesis that the various races which use the bull-roarer all descend from the same stock. But the bull-roarer is introduced here for the very purpose of showing that similar minds, working with simple means towards similar ends, might evolve the bull-roarer and its

mystic uses anywhere. There is no need for a hypothesis of common origin, or of borrowing, to account for this widely diffused sacred object.

The bull-roarer has been, and is, a sacred and magical instrument in many and widely separated lands. It is found, always as a sacred instrument, employed in religious mysteries, in New Mexico, in Australia, in New Zealand, in ancient Greece, and in Africa; while, as we have seen, it is a peasant boy's plaything in England. A number of questions are naturally suggested by the bull-roarer. Is it a thing invented once for all, and carried abroad over the world by wandering races, or handed on from one people and tribe to another? Or is the bull-roarer a toy that might be accidentally hit on in any country where men can sharpen wood and twist the sinews of animals into string? Was the thing originally a toy, and is its religious and mystical nature later; or was it originally one of the properties of the priest, or medicine-man, which in England has dwindled to a plaything? Lastly, was this mystical instrument at first employed in the rites of a civilised people like the Greeks, and was it in some way borrowed or inherited by South Africans, Australians, and New Mexicans? Or is it a mere savage invention, surviving (like certain other features of the Greek mysteries) from a distant state of savagery? Our answer to all these questions is that in all probability the presence of the *βόμβος*, or bull-roarer, in Greek mysteries was a survival from the time when Greeks were in the social condition of Australians.

In the first place, the bull-roarer is associated with mysteries and initiations. Now, mysteries and initiations are things that tend to dwindle and to lose their characteristic features as civilisation advances. The rites of baptism and confirmation are not secret and hidden; they are common to both sexes, they are publicly performed, and religion and morality of the purest sort blend in these ceremonies. There are no other

initiations or mysteries that civilised modern man is expected necessarily to pass through. On the other hand, looking widely at human history, we find mystic rites and initiations numerous, stringent, severe, and magical in character, in proportion to the lack of civilisation in those who practise them. The less the civilisation, the more mysterious and the more cruel are the rites. The more cruel the rites, the less is the civilisation. The red-hot poker with which Mr. Bouncer terrified Mr. Verdant Green at the sham masonic rites would have been quite in place, a natural instrument of probationary torture, in the Freemasonry of Australians, Mandans, or Hottentots. In the mysteries of Demeter or Bacchus, in the mysteries of a civilised people, the red-hot poker, or any other instrument of torture, would have been out of place. But in the Greek mysteries, just as in those of South Africans, Red Indians, and Australians, the disgusting practice of daubing the neophyte with dirt and clay was preserved. We have nothing quite like that in modern initiations. Except at Sparta, Greeks dropped the tortures inflicted on boys and girls in the initiations superintended by the cruel Artemis.<sup>1</sup> But Greek mysteries retained the daubing with mud and the use of the bull-roarer. On the whole, then, and on a general view of the subject, we prefer to think that the bull-roarer in Greece was a survival from savage mysteries, not that the bull-roarer in New Mexico, New Zealand, Australia, and South Africa is a relic of civilisation.

Let us next observe a remarkable peculiarity of the *turndun*, or Australian

bull-roarer. The bull-roarer in England is a toy. In Australia, according to Howitt and Fison,<sup>2</sup> the bull-roarer is regarded with religious awe. "When, on lately meeting with two of the surviving Kurnai, I spoke to them of the *turndun*, they first looked cautiously round them to see that no one else was looking, and then answered me in undertones." The chief peculiarity in connection with the *turndun* is that women may never look upon it. The Chepara tribe, who call it *bribbun*, have a custom that, "if seen by a woman, or shown by a man to a woman, the punishment to both is death."

Among the Kurnai, the sacred mystery of the *turndun* is preserved by a legend, which gives a supernatural sanction to secrecy. When boys go through the mystic ceremony of initiation they are shown *turnduns*, or bull-roarers, and made to listen to their hideous din. They are then told that, if ever a woman is allowed to see a *turndun*, the earth will open, and water will cover the globe. The old men point spears at the boys' eyes, saying: "If you tell this to any woman, you will die, you will see the ground broken up and like the sea; if you tell this to any woman, or to any child, you will be killed!" As in Athens, in Syria, and among the Mandans, the deluge-tradition of Australia is connected with the mysteries. In Gippsland there is a tradition of the deluge. "Some children of the Kurnai, in playing about, found a *turndun*, which they took home to the camp and showed the women. Immediately the earth crumbled away, and it was all water, and the Kurnai were drowned."

In consequence of all this mummery, the Australian women attach great sacredness to the very name of the *turndun*. They are much less instructed in their own theology than the men of the tribe. One woman believed she had heard Pundjel, the chief supernatural being, descend in a mighty rushing noise—that

<sup>1</sup> Pausanias, iii. 15. When the boys were being cruelly scourged, the priestess of Artemis Orthia held an ancient barbaric wooden image of the goddess in her hands. If the boys were spared, the image grew heavy; the more they were tortured, the lighter grew the image. In Samoa the image (shark's teeth) of the god Taema is consulted before battle. "If it felt heavy, that was a bad omen; if light, the sign was good"—the god was pleased (Turner's Samoa, p. 55).

<sup>2</sup> *Kamilaroi and Kurnai*, p. 268.

is, in the sound of the turndun, when boys were being "made men," or initiated.<sup>1</sup> On turnduns the Australian sorcerers can fly up to heaven. Turn-duns carved with imitations of water-flowers are used by medicine-men in rain-making. New Zealand also has her bull-roarers; some of them, carved in relief, are in the Christy Museum, and one is engraved here. I have no direct evidence as to the use of these Maori bull-roarers in the Maori mysteries. Their employment, however, may perhaps be provisionally inferred.

One can readily believe that the New Zealand bull-roarer may be whirled by



any man who is repeating a *Karakia*, or "charm to raise the wind":—

Loud wind,  
Lasting wind,  
Violent whistling wind,  
Dig up the calm reposing sky,  
Come, come.

In New Zealand<sup>2</sup> "the natives regarded the wind as an indication of the presence of their god"—a superstition not peculiar to Maori religion. The "cold wind" felt blowing over the hands at spiritualistic *seances* is also regarded (by some spiritualists) as an indication of the presence of supernatural beings. The windy roaring noise made by the bull-roarer might readily be considered by savages, either as an invitation to a god who should present himself in storm, or as a proof of his being at hand. We have seen that

this view was actually taken by an Australian woman. The hymn called "breath," or *haha*, a hymn to the mystic wind, is pronounced by Maori priests at the moment of the initiation of young men in the tribal mysteries. It is an old conjecture, and is capable of disproof, that the use of the *mystica vannus Iacchi* was a mode of raising a sacred wind analogous to that employed by whirlers of the turndun.<sup>3</sup>

Servius, the ancient commentator on Virgil, mentions, among other opinions, this—that the *vannus* was a sieve, and that it symbolised the purifying effect of the mysteries. But it is clear that Servius was only guessing; and he offsets other explanations, among them that the *vannus* was a crate to hold offerings, *primitias frugum*.

We have studied the bull-roarer in Australia, we have caught a glimpse of it in England. Its existence on the American continent is proved by letters from New Mexico, and by a passage in Mr. Frank Cushing's *Adventures in Zuni*.<sup>2</sup> In Zuni, too, among a semi-civilised Indian tribe, or rather a tribe which has left the savage for the barbaric condition, we find the bull-roarer.<sup>3</sup> Here, too, the instrument—a "slat" Mr. Cushing calls it—is used as a call to the ceremonial observance of the tribal ritual. The Zunis have various "orders of a more or less sacred and sacerdotal character." Mr. Cushing writes:—

These orders were engaged in their annual ceremonies, of which little was

<sup>1</sup> This is not the view of le Père Lafitau, a learned Jesuit missionary in North America, who wrote (1724) a work on savage manners compared with the manners of heathen antiquity. Lafitau, who was greatly struck with the resemblances between Greek and Iroquois or Carib initiations, takes Servius's other explanation of the *mystica vannus*, "an osier vessel containing rural offerings of first fruits." This exactly answers, says Lafitau, to the Carib *Matoutou*, on which they offer sacred cassava cakes.

<sup>2</sup> *The Century Magazine*, May, 1883.

<sup>3</sup> A minute account of the mysteries of Pueblo Indians, and their use of the bull-roarer, will be found in Captain Bourke's *Snake Dance of the Moquis*.

<sup>1</sup> Fison, *Journal Anthropol. Soc.*, Nov., 1883.

<sup>2</sup> Taylor's *New Zealand*, p. 181.

told or shown me; but at the end of four days I heard one morning a *deep whirring noise*. Running out, I saw a procession of three priests of the bow, in plumed helmets and closely-fitting cuirasses, both of thick buckskin—gorgeous and solemn with sacred embroideries and war-paint, begirt with bows, arrows, and war-clubs, and each distinguished by his badge of degree—coming down one of the narrow streets. The principal priest carried in his arms a wooden idol, ferocious in aspect, yet beautiful with its decorations of shell, turquoise, and brilliant paint. It was nearly hidden by symbolic slats and prayer-sticks most elaborately plumed. He was preceded by a guardian with drawn bow and arrows, while another followed, *twirling the sounding slat*, which had attracted alike my attention and that of hundreds of the Indians, who hurriedly flocked to the roofs of the adjacent houses, or lined the street, bowing their heads in adoration, and scattering sacred prayer-meal on the god and his attendant priests. Slowly they wound their way down the hill, across the river, and off towards the mountain of Thunder. Soon an identical procession followed and took its way towards the western hills. I watched them long, until they disappeared, and a few hours afterwards there arose from the top of "Thunder Mountain" a dense column of smoke, simultaneously with another from the more distant western mesa of "U-ha-na-mi," or "Mount of the Beloved."

Then they told me that for four days I must neither touch nor eat flesh or oil of any kind, and for ten days neither throw any refuse from my doors nor permit a spark to leave my house, for "This was the season of the year when the 'grandmother of men' (fire) was precious."

Here then, in Zuni we have the bull-roarer again, and once more we find it employed as a summons to the mysteries. We do not learn, however, that women in Zuni are forbidden to look upon the bull-roarer. Finally, the South African evidence, which is supplied by letters from a correspondent of Mr. Tylor's, proves that in South Africa, too, the bull-roarer is employed to call the men to the celebration of secret functions. A minute description of the instrument,

and of its magical power to raise a wind, is given in Theal's *Kaffir Folklore*, p. 200. The bull-roarer has but lately been a subject of particular research; very probably later investigations will find it in other parts of the modern world besides America, Africa, New Zealand, and Australia. I have myself been fortunate enough to encounter the bull-roarer on the soil of ancient Greece and in connection with the Dionysiac mysteries. Clemens of Alexandria, and Arnobius, an early Christian Father who follows Clemens, describe certain toys of the child Dionysus which were used in the mysteries. Among these are *turbines*, *κῶνος* and *ρόπησος*. The ordinary dictionaries interpret all these as whipping-tops, adding that *ρόπησος* is sometimes "a magic wheel." The ancient scholiast on Clemens, however, writes: "The *κῶνος* is a little piece of wood, to which a string is fastened, and in the mysteries it was whirled round to make a roaring noise."<sup>1</sup> Here, in short, we have a brief but complete description of the bull-roarer, of the Australian *turndun*. No single point is omitted. The *κῶνος*, like the *turndun*, is a small object of wood, it is tied to a string, when whirled round it produces a roaring noise, and it is used at initiations. This is not the end of the matter.

In the part of the Dionysiac mysteries at which the toys of the child Dionysus were exhibited, and during which (as it seems) the *κῶνος*, or bull-roarer, was whirled, the performers daubed themselves all over with clay. This we learn from a passage in which Demosthenes describes the youth of his hated adversary, Aeschines. The mother of Aeschines, he says, was a kind of "wise woman," and dabbler in mysteries. Aeschines used to aid her by bedaubing the initiate over with clay and bran.<sup>2</sup> The word *ἀπομάττων*, here used by

<sup>1</sup> Κῶνος ξυλάριον οὐ ἔξηπται τὸ στραπτὸν καὶ ἐν ταῖς τελεταῖς ἔδοντερο ιναὶ βούσῃ Lobeck, *Aglaophamus* (i., p. 700).

<sup>2</sup> *De Corona*, p. 313.

Demosthenes, is explained by Harpocration as the ritual term for daubing the initiated. A story was told, as usual, to explain this rite. It was said that, when the Titans attacked Dionysus and tore him to pieces, they painted themselves first with clay, or gypsum, that they might not be recognised. Nonnus shows, in several places, that down to his time the celebrants of the Bacchic mysteries retained this dirty trick. Precisely the same trick prevails in the mysteries of savage peoples. Mr. Windwood Read<sup>1</sup> reports the evidence of Mongilomba. When initiated, Mongilomba was "severely flogged in the Fetich House" (as young Spartans were flogged before the animated image of Artemis), and then he was "plastered over with goat-dung." Among the natives of Victoria,<sup>2</sup> the "body of the initiated is bedaubed with clay, mud, charcoal powder, and filth of every kind." The girls are plastered with charcoal powder and white clay, answering to the Greek gypsum. Similar daubings were performed at the mysteries by the Mandans, as described by Catlin; and the Zunis made raids on Mr. Cushing's black paint and Chinese ink for like purposes. On the Congo Mr. Johnson found precisely the same ritual in the initiations. Here, then, not to multiply examples, we discover two singular features in common between Greek and savage mysteries. Both Greeks and savages employ the bull-roarer, both bedaub the initiated with dirt or with white paint or chalk. As to the meaning of the latter very un-Aryan practice, one has no idea, unless it represents the impure uninitiated condition, cleansed later by ceremonies of initiation. It is only certain that war parties of Australian blacks bedaub themselves with white clay to alarm their enemies in night attacks. The

Phocians, according to Herodotus (viii. 27), adopted the same "aisy stratagem," as Captain Costigan has it. Tellies, the medicine-man (*μάντις*), chalked some sixty Phocians, whom he sent to make a night attack on the Thessalians. The sentinels of the latter were seized with supernatural horror, and fled; "and after the sentinels went the army." In the same way, in a night attack among the Australian Kurmai,<sup>1</sup> "they all rapidly painted themselves with pipe-clay; red ochre is no use, it cannot frighten the enemy." If, then, Greeks in the historic period kept up Australian tactics, it is probable that the ancient mysteries of Greece might retain the habit of daubing the initiated which occurs in savage rites.

"Come now," as Herodotus would say, "I will show once more that the mysteries of the Greeks resemble those of Bushmen." In Lucian's Treatise on Dancing<sup>2</sup> we read: "I pass over the fact that you cannot find a single ancient mystery in which there is not dancing. .... To prove this I will not mention the secret acts of worship, on account of the uninitiated. But this much all men know, that most people say of those who reveal the mysteries, that they 'dance them out.'" Here Liddell and Scott write, rather weakly, "to dance out, let out, betray, probably of some dance which burlesqued these ceremonies." It is extremely improbable that, in an age when it was still forbidden to reveal the *ōργα*, or secret rites, those rites would be mocked in popular burlesques. Lucian obviously intends to say that the matter of the mysteries was set forth in *ballads d'action*. Now this is exactly the case in the surviving mysteries of the Bushmen. Shortly after the rebellion of Langalbalele's tribe, Mr. Orpen, the chief magistrate in St. John's Territory, made the acquaintance of Qing, one of the last of an all but exterminated tribe. Qing "had never seen a white man, except fighting," when he became Mr.

<sup>1</sup> *Savage Africa*. Captain Smith, the friend of Pocahontas, mentions the custom in his work on Virginia, pp. 245-48.

<sup>2</sup> Brough Smyth, i. 60, using evidence of Howitt, Taplin, Thomas, and Wilhelmi.

<sup>1</sup> *Kamilaroi and Kurnai*, p. 241.

<sup>2</sup> *Ἡεπὶ ὄρχιστες*, c. 15.

Orpen's guide. He gave a good deal of information about the myths of his people, but refused to answer certain questions. "You are now asking the secrets that are not spoken of." Mr. Orpen asked, "Do you know the secrets?" Qing replied, "No, only the initiated men of that dance know these things." To "dance" this or that means, "to be acquainted with this or that mystery"; the dances were originally taught by Cagn, the mantis, or grasshopper god. In many mysteries Qing, as a young man, was not initiated. He could not "dance them out."<sup>1</sup>

There are thus undeniably close resemblances between the Greek mysteries and those of the lowest contemporary races.

As to the bull-roarer, its recurrence among Greeks, Zunis, Kamilaroi, Maoris, and South African races would be regarded by some students as a proof that all these tribes had a common origin, or had borrowed the instrument from each other. But this theory is quite unnecessary. The bull-roarer is a very simple invention. Anyone might find out that a bit of sharpened wood, tied to a string, makes, when whirred, a tearing noise. Supposing that discovery made, it is soon turned to practical use. All tribes have their mysteries. All want a signal to summon the right persons together, and warn the wrong persons to keep out of the way. The church bell does as much for us; so did the shaken *seistrum* for the Egyptians. People with neither bells nor *seistrum* find the bull-roarer, with its mysterious sound, serve their turn. The hiding of the instrument from women is natural enough. It merely makes the alarm and absence of the curious sex doubly sure. The stories of supernatural consequences to follow if a woman sees the turndun lend a sanction. This is not a random theory, without basis. In Brazil the natives have no bull-roarer, but they

have mysteries, and the presence of the women at the mysteries of the men is a terrible impiety. To warn away the women the Brazilians make loud "devil-music" on what are called "jurupari pipes." Now, just as in Australia, *the women may not see the jurupari pipes on pain of death*. When the sound of the jurupari pipes is heard, as when the turndun is heard in Australia, every woman flees and hides herself. The women are always executed if they see the pipes. Mr. Alfred Wallace bought a pair of these pipes, but he had to embark them at a distance from the village where they were procured. The seller was afraid that some unknown misfortune would occur if the women of his village set eyes on the juruparis.<sup>1</sup>

The conclusion from all these facts seems obvious. The bull-roarer is an instrument easily invented by savages, and easily adopted into the ritual of savage mysteries. If we find the bull-roarer used in the mysteries of the most civilised of ancient peoples, the most probable explanation is that the Greeks retained the mysteries, the bull-roarer, the habit of bedaubing the initiate, the torturing of boys, the sacred obscenities, the antics with serpents, the dances, and the like, from the time when their ancestors were in the savage condition. That more refined and religious ideas were afterwards introduced into the mysteries seems certain, but the rites were in many cases simply savage. Unintelligible (except as survivals) when found among Hellenes, they become intelligible enough among savages, because they correspond to the intellectual condition and magical fancies of the lower barbarism. The same sort of comparison, the same kind of explanation, will account, as we shall see, for the savage myths as well as for the savage customs which survived among the Greeks.

<sup>1</sup> *Cape Monthly Magazine*, July, 1874.

<sup>1</sup> Wallace, *Travels on the Amazon*, p. 349.

## III.

## A FAR-TRAVELED TALE

A MODERN novelist has boasted that her books are read "from Tobolsk to Tangiers." This is a wide circulation, but the widest circulation in the world has probably been achieved by a story whose author, unlike Ouida, will never be known to fame. The tale which we are about to examine is, perhaps, of all myths the most widely diffused, yet there is no ready way of accounting for its extraordinary popularity. Any true "nature-myth," any myth which accounts for the processes of nature or the aspects of natural phenomena, may conceivably have been invented separately, wherever men in an early state of thought observed the same facts, and attempted to explain them by telling a story. Thus we have seen that the earlier part of the myth of Cronus is a nature-myth, setting forth the cause of the separation of Heaven and Earth. Star-myths, again, are everywhere similar, because men who believed all nature to be animated and personal accounted for the grouping of constellations in accordance with these crude beliefs.<sup>3</sup> Once more, if a story like that of "Cupid and Psyche" be found among the most diverse races, the distribution becomes intelligible if the myth was invented to illustrate or enforce a widely prevalent custom. But in the following story no such explanation is even provisionally acceptable.

The gist of the tale (which has many different "openings" and conclusions in different places) may be stated thus: A young man is brought to the home of a

hostile animal, a giant, cannibal, wizard or a malevolent king. He is put by his unfriendly host to various severe trials, in which it is hoped that he will perish. In each trial he is assisted by the daughter of his host. After achieving the adventures, he elopes with the girl, and is pursued by her father. The runaway pair throw various common objects behind them, which are changed into magical obstacles and check the pursuit of the father. The myth has various endings, usually happy, in various places. Another form of the narrative is known, in which the visitors to the home of the hostile being are not wooers of his daughter, but brothers of his wife. The incidents of the flight, in this variant, are still of the same character. Finally, when the flight is that of a brother from his sister's malevolent ghost in Hades (Japan), or, of two sisters from a cannibal mother or step-mother (Zulu and Samoyed), the events of the flight and the magical aids to escape remain little altered. We shall afterwards see that attempts have been made to interpret one of these narratives as a nature-myth; but the attempts seem unsuccessful. We are therefore at a loss to account for the wide diffusion of this tale, unless it has been transmitted slowly from people to people in the immense unknown prehistoric past of the human race.

Before comparing the various forms of the myth in its first shape—that which tells of the mortal lover and the giant's or wizard's daughter—let us give the

<sup>3</sup> *Primitive Culture*, i. 357: "The savage sees individual stars as animate beings, or combines star-groups into living celestial creatures, or limbs of them, or objects connected with them."

<sup>4</sup> This formula occurs among Bushmen and Eskimo (Bleek and Rink).

Scottish version of the story. This version was written down for me, many years ago, by an aged lady in Morayshire:—

NICHT NOUGHT NOTHING.

There once lived a king and a queen. They were long married and had no bairns; but at last the queen had a bairn, when the king was away in far countries. The queen would not christen the bairn till the king came back, and she said: "We will just call him *Nicht Nought Nothing* until his father comes home." But it was long before he came home, and the boy had grown a nice little laddie. At length the king was on his way back; but he had a big river to cross; and there was a spate, and he could not get over the water. But a giant came up to him, and said: "If you will give me *Nicht Nought Nothing*, I will carry you over the water on my back." The king had never heard that his son was called *Nicht Nought Nothing*, and so he promised him. When the king got home again, he was very happy to see his wife again, and his young son. She told him that she had not given the child any name but *Nicht Nought Nothing*, until he should come home again himself. The poor king was in a terrible case. He said: "What have I done? I promised to give the giant who carried me over the river on his back *Nicht Nought Nothing*." The king and the queen were sad and sorry, but they said, "When the giant comes, we will give him the hen-wife's bairn; he will never know the difference." The next day the giant came to claim the king's promise, and he sent for the hen-wife's bairn; and the giant went away with the bairn on his back. He travelled till he came to a big stone, and there he sat down to rest. He said,

"Hidge Hodge, on my back. What time of day is it?"

The poor little bairn said, "It is the time that my mother, the hen-wife, takes up the eggs for the queen's breakfast."

The giant was very angry, and dashed the bairn on the stone and killed it.

The same adventure is repeated with the gardener's son.

Then the giant went back to the king's

house, and said he would destroy them all if they did not give him *Nicht Nought Nothing* this time. They had to do it; and when he came to the big stone, the giant said, "What time of day is it?" *Nicht Nought Nothing* said, "It is the time that my father the king will be sitting down to supper." The giant said, "I've got the right aye noo"; and took *Nicht Nought Nothing* to his own house, and brought him up till he was a man.

The giant had a bonny dochter, and she and the lad grew very fond of each other. The giant said one day to *Nicht Nought Nothing*, "I've work for you to-morrow. There is a stable seven miles long and seven miles broad, and it has not been cleaned for seven years, and you must clean it to-morrow, or I will have you for my supper."

The giant's dochter went out next morning with the lad's breakfast, and found him in a terrible state, for aye as he leaned out a bit, it aye fell in again. The giant's dochter said she would help him, and she cried a' the beasts o' the field, and a' the fowls o' the air, and in a minute they a' came, and carried awa' everything that was in the stable, and made a' clean before the giant came home. He said, "Shame for the wit that helped you; but I have a worse job for you to-morrow." Then he told *Nicht Nought Nothing* that there was a loch seven miles long, and seven miles deep, and seven miles broad, and he must drain it the next day, or else he would have him for supper. *Nicht Nought Nothing* began early next morning, and tried to lave the water with his pail, but the loch was never getting any less, and he did no ken what to do; but the giant's dochter called on all the fish in the sea to come and drink the water, and very soon they drank it dry. When the giant saw the work done, he was in a rage, and said: "I've a worse job for you to-morrow. There is a tree seven miles high, and no branch on it, till you get to the top, and there is a nest; and you must bring down the eggs without breaking one, or else I will have you for my supper." At first the giant's dochter did not know how to help *Nicht Nought Nothing*; but she cut off first her fingers and then her toes, and made steps of them; and he climb the tree, and got all the eggs safe till he came to the bottom, and then one was broken. The

giant's daughter advised him to run away, and she would follow him. So he travelled until he came to a king's palace; and the king and queen took him in, and were very kind to him. The giant's daughter left her father's house, and he pursued her and was drowned. Then she came to the king's palace where Nicht Nought Nothing was. And she went up into a tree to watch for him. The gardener's daughter, going to draw water in the well, saw the shadow of the lady in the water, and thought it was herself, and said: "If I'm so bonny, if I'm so brave, do you send me to draw water?" The gardener's wife went out, and she said the same thing. Then the gardener went himself, and brought the lady from the tree, and led her in. And he told her that a stranger was to marry the king's daughter, and showed her the man—and it was Nicht Nought Nothing asleep in a chair. And she saw him, and cried to him: "Waken, waken, and speak to me!" But he would not waken, and so she cried:

I cleaned the stable, I laved the loch, and  
I climb the tree,  
And all for the love of thee,  
And thou wilt not waken and speak to me.

The king and the queen heard this, and came to the bonny young lady, and she said:

"I canna get Nicht Nought Nothing to speak to me for all that I can do."

Then were they greatly astonished when she spoke of Nicht Nought Nothing, and asked where he was, and she said: "He that sits there in the chair." Then they ran to him and kissed him, and called him their own dear son; and he wakened, and told them all that the giant's daughter had done for him, and of all her kindness. Then they took her in their arms and kissed her, and said she should now be their daughter, for their son should marry her.

And they lived happy all their days.

In this variant of the story, which we may use as our text, it is to be noticed that a *lacuna* exists. The narrative of the flight omits to mention that the runaways threw things behind them which became obstacles in the giant's way. One of these objects probably turned into a lake, in which the giant was

drowned.<sup>1</sup> A common incident is the throwing behind of a comb, which changes into a thicket. The formula of leaving obstacles behind occurs in the Indian collection, the *Kaithasat sagara* (vii., xxxix.). "The Battle of the Birds," in Campbell's *Tales of the West Highlands*, is a very copious Gaelic variant. Russian parallels are "Vasilissa the Wise and the Water King" and "The King Bear."<sup>2</sup> The incident of the flight and the magical obstacles is found in Japanese mythology.<sup>3</sup> The "ugly woman of Hades" is sent to pursue the hero. He casts down his black head-dress, and it is instantly turned into grapes; he fled while she was eating them. Again, "he cast down his multitudinous and close-toothed comb, and it instantly turned into bamboo sprouts." In the Gaelic version the pursuer is detained by talkative objects which the pursued leave at home; and this marvel recurs in Zululand, and is found among the Bushmen. The Zulu versions are numerous.<sup>4</sup> Oddly enough, in the last variant the girl performs no magic feat, but merely throws sesamum on the ground to delay the cannibals, for cannibals are very fond of sesamum.<sup>5</sup>

Here, then, we have the remarkable details of the flight, in Zulu, Gaelic, Norse, Malagasy,<sup>6</sup> Russian, Italian, Japanese. Of all incidents in the myth, the incidents of the flight are most widely known. But the whole connected series of events—the coming of the wooer; the love of the hostile being's daughter; the tasks imposed on the wooer; the aid rendered by the

<sup>1</sup> The events of the flight are recorded correctly in the Gaelic variant, "The Battle of the Birds." (Campbell, *Tales of the West Highlands*, vol. i., p. 25.)

<sup>2</sup> Ralston, *Russian Folk Tales*, 132; Kohler, *Orient and Occident*, ii. 107, 114.

<sup>3</sup> *Ko ti ki*, p. 36.

<sup>4</sup> Callaway, pp. 51, 53, 64, 145, 228.

<sup>5</sup> See also "Petrosinella" in the *Pentamron*, and "The Mastermaid" in *Davent's Tales from the Norse*.

<sup>6</sup> *Folklore Journal*, August, 1883.

daughter; the flight of the pair; the defeat or destruction of the hostile being—all these, or most of these, are extant, in due sequence, among the following races. The Greeks have the tale, the people of Madagascar have it, the Lowland Scotch, the Celts, the Russians, the Italians, the Algonquins, the Finns, and the Samoans have it. Now, if the story were confined to the Aryan race, we might account for its diffusion by supposing it to be the common heritage of the Indo-European peoples, carried everywhere with them in their wanderings. But when the tale is found in Madagascar, North America, Samoa, and among the Finns, while many scattered incidents occur in even more widely severed races, such as Zulus, Bushmen, Japanese, Eskimo, Samoyeds, the Aryan hypothesis becomes inadequate.

To show how closely, all things considered, the Aryan and non-Aryan possessors of the tale agree, let us first examine the myth of Jason.

The earliest literary reference to the myth of Jason is in the *Iliad* (vii. 467, xxi. 747). Here we read of Euneos, a son whom Hypsipyle bore to Jason in Lemnos. Already, even in the *Iliad*, the legend of Argo's voyage has been fitted into certain well-known geographical localities. A reference in the *Odyssey* (xii. 72) has a more antique ring: we are told that of all barques Argo alone escaped the jaws of the Rocks Wandering, which clashed together and destroyed ships. Argo escaped, it is said, "because Jason was dear to Hera." It is plain, from various fragmentary notices, that Hesiod was familiar with several of the adventures in the legend of Jason. In the *Theogony* (993-98) Hesiod mentions the essential facts of the legend: how Jason carried off from Aëtes his daughter, "after achieving the adventures, many and grievous, which were laid upon him." At what period the home of Aëtes was placed in Colchis it is not easy to determine. Mimmerinus, a contemporary of Solon, makes

the home of Aëtes lie "on the brink of ocean," a very vague description.<sup>1</sup> Pindar, on the other hand, in the splendid Fourth Pythian Ode, already knows Colchis as the scene of the loves and flight of Jason and Medea.

"Long were it for me to go by the beaten track," says Pindar, "and I know a certain short path." Like Pindar, we may abridge the tale of Jason. He seeks the golden fleece in Colchis: Aëtes offers it to him as a prize for success in certain labours. By the aid of Medea, the daughter of Aëtes, the wizard king, Jason tames the fire-breathing oxen, yokes them to the plough, and drives a furrow. By Medea's help he conquers the children of the teeth of the dragon, subdues the snake that guards the fleece of gold, and escapes, but is pursued by Aëtes. To detain Aëtes, Medea throws behind the mangled remains of her own brother, Apsyrtos, and the Colchians pursue no further than the scene of this bloody deed. The savagery of this act survives even in the work of a poet so late as Apollonius Rhodius (iv. 477), where we read how Jason performed a rite of savage magic, mutilating the body of Apsyrtos in a manner which was believed to appease the avenging ghost of the slain. "Thrice he tasted the blood, thrice spat it out between his teeth," a passage which the scholiast says contains the description of an archaic custom popular among murderers.

Beyond Tomi, where a popular etymology fixed the "cutting up" of Apsyrtos, we need not follow the fortunes of Jason and Medea. We have already seen the wooer come to the hostile being, win his daughter's love, achieve the adventures by her aid, and flee in her company, delaying by a horrible device the advance of her pursuers. To these incidents in the tale we confine our attention.

Many explanations of the Jason myth have been given by scholars who thought

<sup>1</sup> *Poetae Minores Gr.*, ii.

the sea. There she became a fish, and recovered the ring. They set off to the god's house, but met him pursuing them, with the help of his other daughter. "Puapae and Siasi threw down the comb, and it became a bush of thorns in the way to intercept the god and Puanli," the other daughter. Next they threw down a bottle of earth, which became a mountain; "and then followed their bottle of water, and that became a sea, and drowned the god and Puanli."<sup>1</sup>

This old Samoan song contains nearly the closest savage parallel to the various household tales which find their heroic and artistic shape in the Jason saga. Still more surprising in its resemblances is the Malagasy version of the narrative. In the Malagasy story the conclusion is almost identical with the winding up of the Scotch fairy tale. The girl hides in a tree; her face, seen reflected in a well, is mistaken by women for their own faces, and the recognition follows in due course.<sup>2</sup>

Like most Red Indian versions of popular tales, the Algonquin form of the Jason saga is strongly marked with the peculiarities of the race. The story is recognisable, and that is all.

The opening, as usual, differs from other openings. Two children are deserted in the wilderness, and grow up to manhood. One of them loses an arrow in the water; the elder brother, Panigwun, wades after it. A magical canoe flies past: an old magician, who is alone in the canoe, seizes Panigwun and carries him off. The canoe fleets along, like the barques of the Phaeacians, at the will of the magician, and reaches the isle where, like the Samoan god of song, he dwells with his two daughters. "Here, my daughter," said he, "is a young man for your husband." But the daughter knew that the proposed husband was but another victim of the old man's

magic arts. By the daughter's advice, Panigwun escaped in the magic barque, consoled his brother, and returned to the island. Next day the magician, Mishosha, set the young man to hard tasks and perilous adventures. He was to gather gulls' eggs; but the gulls attacked him in dense crowds. By an incantation he subdued the birds, and made them carry him home to the island. Next day he was sent to gather pebbles, that he might be attacked and eaten by the king of the fishes. Once more the young man, like the Finnish Ilmarinen in Pohjola, subdued the mighty fish, and went back triumphant. The third adventure, as in "Nicht Nought Nothing," was to climb a tree of extraordinary height in search of a bird's nest. Here, again, the youth succeeded, and finally conspired with the daughters to slay the old magician. Lastly the boy turned the magician into a sycamore-tree, and won his daughter. The other daughter was given to the brother who had no share in the perils.<sup>1</sup> Here we miss the incident of the flight;<sup>2</sup> and the magician's daughter, though in love with the hero, does not aid him to perform the feats. Perhaps an Algonquin brave would scorn the assistance of a girl. In the *Kalevala* the old hero, Wainamoinen, and his friend Ilmarinen, set off to the mysterious and hostile land of Pohjola to win a bride. The maiden of Pohjola loses her heart to Ilmarinen, and, by her aid, he bridles the wolf and bear, ploughs a field of adders with a plough of gold, and conquers the gigantic pike that swims in the Styx of Finnish mythology. After this point the story is interrupted by a long sequel of popular bridal songs, and, in the wandering course of the rather aimless epic, the flight and its incidents have been forgotten, or are neglected. These incidents recur, however, in

<sup>1</sup> Turner's *Samoa*, p. 102. In this tale only the names of the daughters are translated; they mean "white fish" and "dark fish."

<sup>2</sup> *Folklore Journal*, August, 1883.

<sup>1</sup> Schoolcraft, *Algic Researches*, ii. 94-104.

<sup>2</sup> The Red Indian version of the flight is given in "The Red Horse of the Dacotahs."<sup>3</sup> — *Century Magazine*, 1884.

the thread of somewhat different plots. We have seen that they are found in Japan, among the Eskimo, among the Bushmen, the Samoyeds, and the Zulus, as well as in Hungarian, Magyar, Celtic, and other European household tales.

The conclusion appears to be that the central part of the Jason myth is incapable of being explained either as a nature-myth or as a myth founded on a disease of language. So many languages could not take the same malady in the same way; nor can we imagine any series of natural phenomena that would inevitably suggest this tale to so many diverse races. We must suppose, therefore, either that all wits jumped and invented the same romantic series of situations by accident, or that all men spread from one centre, where the story was known, or that the story, once invented, has drifted all round the world. If the last theory be approved of, the tale will be like the Indian Ocean shell found lately in the Polish bone-cave,<sup>1</sup>

or like the Egyptian beads discovered in the soil of Dahomey. The story will have been carried hither and thither, in the remotest times, to the remotest shores, by traders, by slaves, by captives in war, or by women torn from their own tribe and forcibly settled as wives among alien peoples.

Stories of this kind are everywhere the natural property of mothers and grandmothers. When we remember how widely diffused is the law of exogamy, which forbids marriage between a man and woman of the same stock, we are impressed by the number of alien elements which must have been introduced with alien wives. Where husband and wife, as often happened, spoke different languages, the woman would inevitably bring the hearthside tales of her childhood among a people of strange speech. By all these agencies, working through dateless time, we may account for the diffusion, if we cannot explain the origin, of tales like the central arrangement of incidents in the career of Jason.

<sup>1</sup> *Nature*, March 14th, 1884.

#### IV.

### APOLLO AND THE MOUSE

THE following essay is to be taken under all reserve. Since it was written we have learned much, from the excavations on ancient Greek and Cretan sites, as to the great civilisation, from 2500 to 1500 B.C., which preceded, on the shores and isles of the Ægean Sea, the new Achæan civilisation known to Homer. The diggings of Mr. Arthur Evans and his followers have proved that a civilisation, in many ways more akin to our own than any other, existed in these regions, and was in contact with that of Egypt. The

people wrote copiously; but, till their writing has been deciphered, we cannot know anything about their language. Scholars generally suppose that it was not Greek, and, among words surviving out of one of their tongues, are usually reckoned those ending in *inthos*, as *Araminthos* (a bath), *Curinthos*, and other place-names. Among these words is *Sminthos*, a shrew-mouse, and, if this be not originally Greek, the Greek religious associations of the shrew-mouse must have been introduced by the prior

Aegean race, perhaps from North Africa, among whom the ancestors of Homer's heroes settled. Homer never alluded to anything at all resembling totemism; in Homer are very few traces of survival of savage ideas. His poems were composed, as Mr. Arthur Evans agrees with me in holding, at the end of the last period of "Aegean" or "Minoan" civilisation, by a member of a race which had long spoken Greek, and which, at least as represented by its poet, had emancipated itself from savage ideas, as of human sacrifice, magic, and relics of totemism. There was a recrudescence of some of these things in the Greek poetry of the ninth and eighth centuries B.C. And henceforth they are conspicuous in Greek myths, ritual, literature, and temple legends. We cannot tell to what extent they were derived from the prior Aegean peoples, to what extent from the lower classes of the Achaeans themselves; but they are usually ignored by the aristocratic poet, Homer. Unlike his successors, the Cyclic poets of the ninth and eighth centuries B.C., the Greek tragedians, and the Greeks in general, Homer knows nothing even of the worship of ancestral ghosts, and has no room for ghosts in his philosophy, except in the case of men whose dead bodies have not been duly cremated. And they are feeble phantasms. For these reasons it may well be doubted whether the traces of totemism in Greece are of Achaean origin. Moreover, the studies of Mannhardt, and of Mr. Frazer in *The Golden Bough*, suggest that many, at least, of the animals associated with Greek religion were vehicles or representatives of "the Corn spirit," or other spirits of vegetation, propitiated for purposes of securing fertility and good harvests.

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WHY is Apollo, especially the Apollo of the Troad, he who showered the darts of pestilence among the Greeks, so constantly associated with a mouse? The very name, Smintheus, by which his

favourite priest calls on him in the *Iliad* (i. 39), might be rendered "Mouse Apollo," or "Apollo, Lord of Mice." As we shall see later, mice lived beneath the altar, and were fed in the holy of holies of the god, and an image of a mouse was placed beside or upon his sacred tripod. The ancients were puzzled by these things, and, as will be shown, accounted for them by "mouse-stories," *Σμυνθιακοὶ λόγοι*, so styled by Eustathius, the mediæval interpreter of Homer. Following our usual method, let us ask whether similar phenomena occur elsewhere, in countries where they are intelligible. Did insignificant animals elsewhere receive worship: were their effigies elsewhere placed in the temples of a purer creed? We find answers in the history of Peruvian religion.

After the Spanish conquest of Peru, one of the European adventurers, Don Garcilasso de la Vega, married an Inca princess. Their son, also named Garcilasso, was born about 1540. His famous book, *Comentarios Reales*, contains the most authentic account of the old Peruvian beliefs. Garcilasso was learned in all the learning of the Europeans, and, as an Inca on the mother's side, had claims on the loyalty of the defeated race. He set himself diligently to collect both their priestly and popular traditions, and his account of them is the more trustworthy as it coincides with what we know to have been true in lands with which Garcilasso had little acquaintance.

To Garcilasso's mind, Peruvian religion seems to be divided into two periods—the age before and the age which followed the accession of the Incas, and their establishment of sun-worship as the creed of the State. In the earlier period, the pre-Inca period, he tells us, "an Indian was not accounted honourable unless he was descended from a fountain, river, or lake, or even from the sea, or from a wild animal, such as a bear, lion, tiger, eagle, or the bird they call *cuntur* (condor), or some other bird of

prey."<sup>1</sup> To these worshipful creatures "men offered what they usually saw them eat" (i. 53). But men were not content to adore large and dangerous animals. "There was not an animal, how vile and filthy soever, that they did not worship as a god," including "lizards, toads, and frogs." In the midst of these superstitions the Incas appeared. Just as the tribes claimed descent from animals, great or small, so the Incas drew *their* pedigree from the sun, which they adored like the *gens* of the Aurelii in Rome.<sup>2</sup> Thus every Indian had his *pacarissa*, or, as the North American Indians say, *totem*,<sup>3</sup> a natural object from which he claimed descent, and which, in a certain degree, he worshipped. Though sun-worship became the established religion, worship of the animal *pacarissas* was still tolerated. The sun-temples also contained *huacas*, or images, of the beasts which the Indians had venerated.<sup>4</sup> In the great temple of Pachacamac, the most spiritual and abstract god of Peruvian faith, "they worshipped a she-fox and an emerald. The devil also appeared to them, and spoke in the form of a tiger, very fierce."<sup>5</sup> This toleration of an older and cruder, in subordination to a purer, faith is a very common feature in religious evolution. In Catholic countries, to this day, we may watch, in Holy Week, the Adonis feast described by Theocritus,<sup>6</sup> and the procession and entombment of the old god of spring.

"The Incas had the good policy to collect all the tribal animal gods into

their temples in and round Cuzco, in which the two leading gods were the Master of Life and the Sun." Did a process of this sort ever occur in Greek religion, and were older animal gods ever collected into the temples of such deities as Apollo?

While a great deal of scattered evidence about many animals consecrated to Greek gods points in this direction, it will be enough, for the present, to examine the case of the Sacred Mice. Among races which are still in the totemistic stage, which still claim descent from animals and from other objects, a peculiar marriage law generally exists, or can be shown to have existed. No man may marry a woman who is descended from the same ancestral animal, and who bears the same totem-name, and carries the same badge or family crest, as himself. A man descended from the Crane, and whose family name is Crane, cannot marry a woman whose family name is Crane. He must marry a woman of the Wolf, or Turtle, or Swan, or other name, and her children keep her family title, not his. Thus, if a Crane man marries a Swan woman, the children are, Swans, and none of them may marry a Swan: they must marry Turtles, Wolves, or what not, and *their* children, again, are Turtles or Wolves. Thus there is necessarily an eternal come and go of all the animal names known in a district. As civilisation advances these rules grow obsolete. People take their names from the father, as among ourselves. Finally, the dwellers in a given district, having become united into a local tribe, are apt to drop the various animal titles, and to adopt, as the name of the whole tribe, the name of the chief, or of the predominating family. Let us imagine a district of some twenty miles, in which there are Crane, Wolf, Turtle, and Swan families. Long residence together, and common interests, have welded them into a local tribe. The chief is of the Wolf family, and the tribe, sinking family differences

<sup>1</sup> *Com. Real.*, i. 75.

<sup>2</sup> See *Early History of the Family, infra.*

<sup>3</sup> The names *Totem* and *Totemism* have been in use at least since 1702, among writers on the North American tribes. Prof. Max Müller (*Academy*, Jan., 1884) says the word should be, not *Totem*, but *Ote* or *Otem*. Mr. Tylor's inquiries among the Red Men support this. Long, an interpreter among the Indians, introduced the word *Totemism* in 1792; but Lafitau (1724) had already explained some classical myths as survivals of Totemism.

<sup>4</sup> Christoval de Moluna (1570), p. 5.

<sup>5</sup> Cieza de Leon, p. 183.

<sup>6</sup> *Idyll xv.*

and family names, calls itself "the Wolves." Such tribes were probably, in the beginning, the inhabitants of the various Egyptian towns which severally worshipped the wolf, or the sheep, or the crocodile, and abstained religiously (except on certain sacrificial occasions) from the flesh of the animal that gave them its name.<sup>1</sup>

It has taken us long to reach the Sacred Mice of Greek religion, but we are now in a position to approach their august divinity. We have seen that the sun-worship superseded, without abolishing, the tribal *pacarissas* in Peru, and that the *huacas*, or images, of the sacred animals were admitted under the roof of the temple of the Sun. Now it is recognised that the temples of the Sminthian Apollo contained images of sacred mice among other animals, and our argument is that here, perhaps, we have another example of the Peruvian religious evolution. Just as, in Peru, the tribes adored "vile and filthy" animals, just as the solar worship of the Incas subordinated these, just as the *huacas* of the beasts remained in the temples of the Peruvian sun, so, we suggest, the tribes along the Mediterranean coasts had, at some very remote prehistoric period, their animal *acarissas*: these were subordinated to the religion (to some extent solar) of Apollo; and the *huacas*, or animal idols, survived in Apollo's temples.

If this theory be correct, we shall probably find the mouse, for example, revered as a sacred animal in many places. This would necessarily follow, if the marriage customs which we have described ever prevailed on Greek soil, and scattered the mouse-name far and wide.<sup>2</sup>

<sup>1</sup> Sayce, *Herodotus*, p. 344; Herodotus, ii. 42; Wilkinson's *Ancient Egyptians* (1878, ii. 475, note 2); Plutarch, *De Is. et Os.*, 71, 72; Athenaeus, vii. 299; Strabo, xvii. 813.

<sup>2</sup> The mouse, according to Dalton, is still a *temtem* among the Oraons of Bengal. A man of the Mouse "motherhood," as the totem kindred is locally styled, may not eat mice (esteemed a *lethaway*), nor marry a girl who is a Mouse.

Traces of the Mouse kins, and of adoration, if adoration there was, of the mouse, would linger on in the following shapes: (1) Places would be named from mice, and mice would be actually held sacred in themselves. (2) The mouse-name would be given locally to the god who superseded the mouse. (3) The figure of the mouse would be associated with the god, and used as a badge, or a kind of crest, or local mark, in places where the mouse had been a venerated animal. (4) Finally, myths would be told to account for the sacredness of a creature so undignified.

Let us take these considerations in their order:—

(1) If there were local mice tribes, deriving their name from the worshipful mouse, certain towns settled by these tribes would retain a reverence for mice.

In Chrysa, a town of the Troad, according to Heraclides Ponticus, mice were held sacred, the local name for shrew-mouse being *σρινθος*. Many places bore this mouse name. According to Strabo,<sup>1</sup> This is precisely what would have occurred had the Mouse totem and the Mouse stock been widely distributed.<sup>2</sup> The scholiast<sup>3</sup> mentions Sminthus as a place in the Troad. Strabo speaks of two places deriving their name from Sminthus, or mouse, near the Sminthian temple, and others near Larissa. In Rhodes and Lindus, the mouse place-name recurs, "and in many other districts" (*Καὶ ἀλλόθι δὲ πολλάχιόθι*). Strabo (v. 486) names Caressus, and Poecissa, in Ceos, among the other places which had Sminthian temples, and, presumably, were once centres of tribes named after the mouse.

Here, then, are a number of localities in which the Mouse Apollo was adored, and where the old mouse-name lingered. That the mice were actually held sacred in their proper persons we learn from

<sup>1</sup> XIII. 604. Casaub. 1620.

<sup>2</sup> There were Sminthiac feasts at Rhodes, Gela, Lesbos, and Crete (De Witte, *Revue Numismatique*, N.S. iii. 3-11).

<sup>3</sup> *Iliad* i. 39.

